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How to stabilize the currency exchange rate

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How to stabilize the currency exchange rate²

The Russian Ruble exchange rate has been fluctuating hugely. The problem now is not so much the Ruble's weakness as instability of its exchange rate, volatility. The management of the Central Bank claims that stabilization of the Ruble exchange rate is not possible though it is the responsibility of the Bank of Russia under the Constitution.

In 2015, many other countries had to deal with the weakening of their currencies. Issues regarding exchange rate management by the Central Banks have again become the focal point of heated debate. As a matter of fact, any country's Central Bank has two methods of stabilizing the exchange rate available to it. Firstly, «adaptive» approach to stabilization may be adopted. In this case, the Central Bank, as it were, «adjusts itself» to the tendencies unfolding in the market, without being active in trying to influence them. Secondly, the Central Bank may use an «active» way of stabilizing the exchange rate. In such a case, it needs to influence the exchange rate without resorting to foreign exchange interventions. Both methods, the adaptive one and the active one, do not require gold or foreign exchange reserves to be spent. It is even the other way round, - the reserves become replenished, while economy gets an impetus for growth.

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RELEVANCE OF RUBLE EXCHANGE RATE STABILIZATION

Why Is It Important?

In 2015, many countries had to deal with the weakening of their currencies. Issues regarding exchange rate management by the Central Banks have again become the focal point of heated debate.

For example, in recent time, the Ruble exchange rate has been sustaining serious fluctuations. After sharp weakening, periods of strengthening often set in. Government officials, economists, representatives of the business sector are virtually unanimous in their opinion that exchange rate fluctuations, its instability or, as economists say, high volatility, are even worse than simple weakening of the Ruble.

Quotations:

Alexey Ulyukhaev, Minister of Economic Development.

«The problem is not that the currency quotation is high or low. The problem is not whether the dollar costs 30 or 70 Rubles. The problem is that it fluctuates badly».

[Interfax](#), December 2015.

Dmitry Tulin, Deputy Head of the Central Bank.

«Volatility of the exchange rate, instability result in asymmetrical unidirectional inflationary influence on internal prices»

[RBC](#), November 2015.

Vladimir Mau, Rector of the Russian Academy of National Economy and Civil Service.

«Instability of foreign exchange rate [is alarming], I underline — it is the unstable [exchange rate] rather than high or low exchange rate that is the problem. The Russian economy is quite ready to adapt itself and to function efficiently at different exchange rates. But when it changes significantly within a short space of time — this is an extremely unpleasant thing. Just as any instability generally...»

[RBC](#), December 2015.

Evsey Gurvich, Head of Economic Expert Group.

«It would make sense to conduct flexible inflationary targeting, that is not only achieving a pre-determined inflation target but trying to smoothen out exchange rate variations as high volatility of the exchange rate has a negative impact on the economy»

[Gazeta.ru](#), January 2016.

Entrepreneurs' opinion

Russian business is scared of the Ruble volatility more than anything else. Russian business considers volatility of the Ruble exchange rate to be the worst risk in 2016, shows the opinion poll of 107 company executives conducted by PwC

[Vedomosti](#), January 2016.

Oleg Afanasiev, KAMAZ (Russian truck producer).

«It doesn't matter what the Ruble to dollar or to Euro exchange rate is, what matters is for it to be stable. The most fearsome about these fluctuations is the fluctuations themselves. As they make people nervous. People start to hold back deliveries, fail to agree on future contracts, they sit around and wait for the Ruble exchange rate to stabilize. Everyone is afraid of losing something on this...»

[Chelny-biz.ru](#), February 2016.

Great volatility of the exchange rate adversely impacts the economy for many reasons. Its unpredictable leaps and bounds disorient the agents of the economy at all its levels – from the population up to the government. As the exchange rate of the local currency is one of the main benchmarks for decisions to be made by the agents of the economy. In the economies open to the external markets similar to the Russian economy where foreign trade turnover shapes the majority of the GDP, this is the main benchmark.

Firstly, when exchange rate fluctuations are high, the costs incurred in all the transactions which are in this or that way connected with export and import business shoot up. This, in its turn, results in additional price hikes due to the uncertainty factor. In other words, it is not only «alien» producers – importers who suffer from volatility (including suffering from Ruble's sharp strengthening) but also «domestic» producers - exporters. But this is not all. Exchange rate instability is also a problem for those who is trying to compete against imports in the domestic market.

Secondly, those consumers who wish to continue to be able to buy imported goods or travel abroad or who just wish to conserve their savings, increase the foreign exchange proportion of their savings in order to protect themselves from uncertainty. All this is far from helping the ruble stabilization.

Thirdly, for years the Russians have been developing a habit of orienting themselves to the exchange rate as a kind of stability benchmark. The exchange rate leaps and bounds affect their assessment of the events taking place around them and may serve as a reason for the general public to reduce consumption and for entrepreneurs to cut back upon investments. And even for those entrepreneurs who do not intend to give up investments it becomes difficult to plan such investments.

The stable Ruble is so important for the economy that it has found its reflection at the legislative level. Both the Constitution of the Russian Federation (art.75) and «Federal Law on the Central Bank of the Russian Federation» (art.3) propagate that «protecting the Ruble and ensuring that the Ruble is sustainable is the pivotal function of the Central Bank of the Russian Federation».

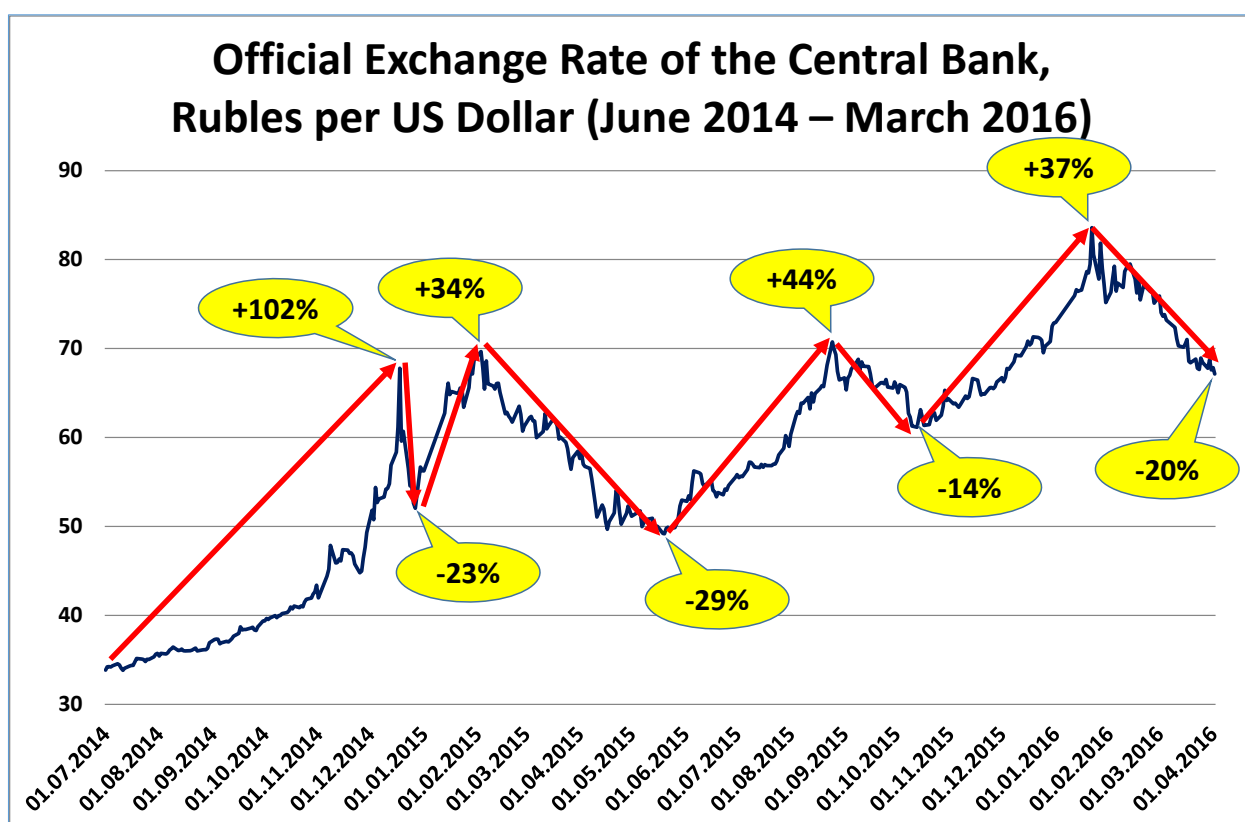
Current Situation Is a Currency “See Saw”

However, the declarations which the management of the Central Bank of Russia have been making do not instill too much hope for stabilization. *"We would love the Ruble exchange rate to be stable in relation to, at least, the basket of currencies. This would be extremely useful for the economy and anti-inflation policy. But **this is impossible to ensure** (highlighted in italics and bold type by me, S.B.). We have to give it a thought and see how we can mitigate the consequences of the exchange rate fluctuations",* – stated Dmitry Tulin, First Deputy Head of the Central Bank, as [RBC](#) reports (Korischenko, 2015)

Elvira Nabiullina, Head of the Central Bank of Russia, having stated that the Ruble exchange rate can be only stabilized by diversification of the economy ([Kommersant, 2016](#)), did not only shrug off the responsibility entrusted to her by the Constitution and the law on the Central Bank, but also attempted to pass the buck to the Government (as, it is the Government, rather than the Central Bank, that is responsible for diversification of the economy).

The Bank of Russia, thus, signed off on the certificate of its inadequacy. Small wonder that sharp fluctuations of the Ruble exchange rate has been going on for more than a year already (*graph 1*).

Graph 1. The exchange rate has been characterized by extreme instability since July 2014.



Source: Central Bank of the RF. Changes in percent compared to the previous minimum/maximum are shown.

The January 2016 events when the Ruble exchange rate set new records for depreciation with respect to other currencies showed that stability was yet to be achieved.

The noticeable strengthening of the Ruble that began after this, however odd it may seem, is not indicative of stabilization, it only adds more uncertainty.

This strengthening is only making life tougher for the agents of the Russian economy because, once again, it adds more uncertainty to the conditions for solving the problems confronting us. Because both in industry, in construction sector, in trade

and in a household, for planning your actions, you need a stable rather than a strong Ruble.

The statements by the top management of the Central Bank quoted above go to show that they do not see any possibility of stabilizing the Ruble's exchange rate using the resources of the Central Bank. However, other countries' experience and simple logic tell us that stability in the foreign exchange market *is* possible, and it is exactly in the hands of the Central Bank that the key tools to ensure such stability are. Below we shall review the main capabilities of stabilizing the exchange rate available to the Central Bank.

KEY DEFINITIONS

We shall consider the general case: the Central Bank of a country has been trying to stabilize its «local» currency with respect to the other «external» currency (or the basket of «external» currencies). In other words, the approaches set out below are valid for any country, and not just for Russia. To simplify the narrative, we shall now agree on the following terms.

Dollar As an Example of «External» Currency

Subsequently, we will be talking about stabilization of the Ruble exchange rate or of any other local currency relative to the ***US dollar***. But this is done only in order to simplify the narrative. All the stabilization principles set out below are just as applicable to stabilization of the exchange rate relative to another currency (the Euro, for example) or relative to the basket of currencies. As a rule, the «external» currencies, in relation to which they try to stabilize the exchange rate are the so-called «reserve» currencies: the dollar, the Euro, the Yen, the British pound.

Ruble As an Example of «Local» Currency

We shall mainly be talking about stabilization of the ***Ruble's*** exchange rate. However, all the basic principles are just as well applicable to stabilization of any other currencies.

Equilibrium Exchange Rate

Very important in our further narrative will be the term «equilibrium exchange rate». We shall call ***equilibrium exchange rate*** the Ruble exchange rate (or that of any other local currency), which has taken shape in the market ***with no interventions of the Central Bank*** in the foreign exchange market.

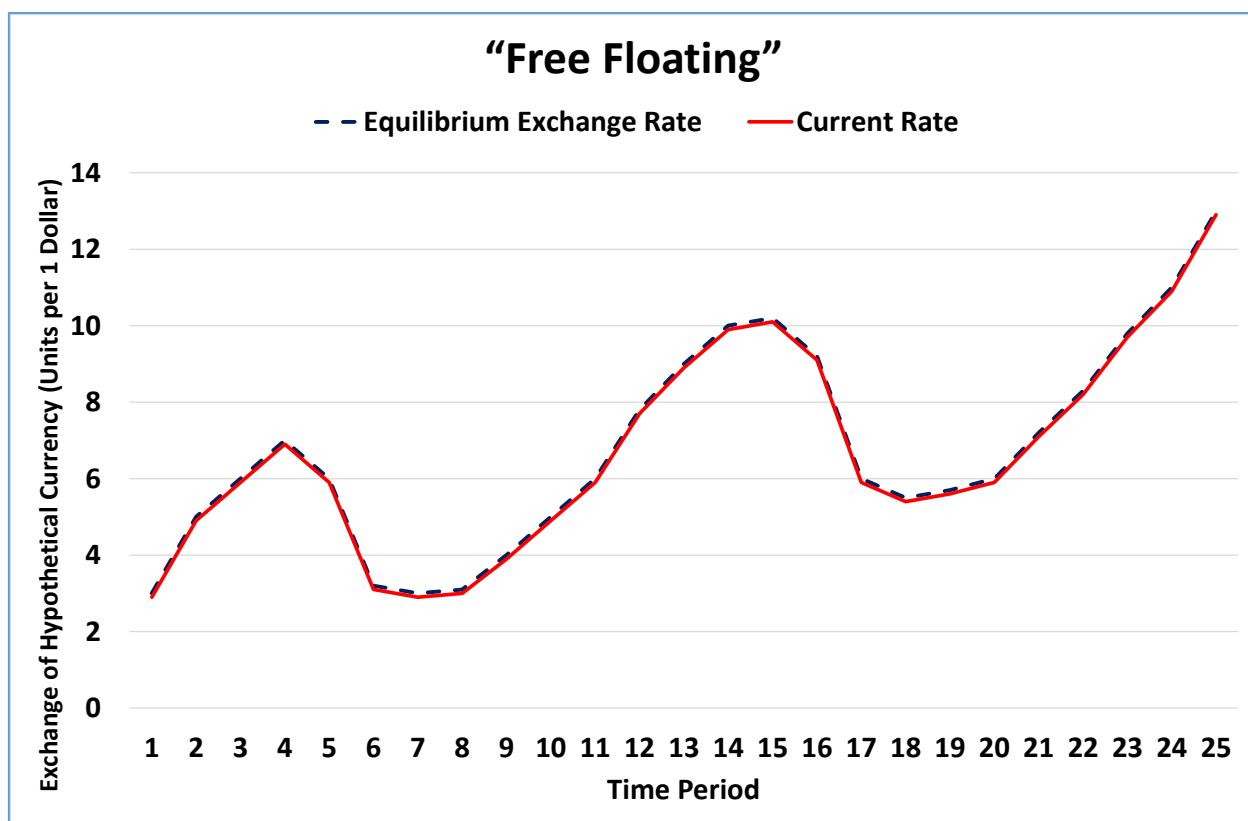
If the Central Bank is carrying out operations in the foreign exchange market (for example, in the case of the fixed exchange rate policy), then *equilibrium exchange rate would be the hypothetical exchange rate which **would** have taken shape in case there had not been such operations by the Central Bank*. In this case, it is practically impossible to determine the equilibrium exchange rate precisely. But there are approaches which help determine it with the precision sufficient for the actions

carried out by the Central Bank (see below «How To Determine the Equilibrium Exchange Rate»).

Freely Floating Exchange Rate

Determination of the equilibrium exchange rate means that if the Central Bank is not selling or buying foreign exchange in the market, then the actual (current) exchange rate and the equilibrium one coincide (*diagram 1*).

Diagram 1. If the Central Bank is not buying or selling any foreign exchange, the actual exchange rate will then be equal to the equilibrium one.



Source: diagram was devised by the author.

In line with this definition, for example, the actual exchange rate of the Ruble in the market, the moment the Central Bank of Russia gives up on interventions, can be considered to be the equilibrium exchange rate.

As can be seen from our diagram, the equilibrium exchange rate is constantly changing. It can change under the influence of external causes which are beyond the control of the Central Bank. For Russia, as examples of such external causes, one can mention the falling oil prices or the raising of interest rates by the US Federal Reserve System.

The Bank of Russia can also influence the equilibrium exchange rate without using interventions. For example, given that all the other conditions are the same, the raising of the key interest rate would «strengthen» the Ruble, while the lowering of

the interest rate would «weaken» it. This takes place, as a minimum, in the medium term perspective³.

Fixed Exchange Rate

As diagram 1 shows, in the case of «free floating», the actual exchange tradable rate of the Ruble approximately equals the equilibrium one. It is quite a different thing, if the Central Bank, for some reasons, «fixes» the exchange rate. *The fixed exchange rate*⁴ is the exchange rate, quoted by the Central Bank as the target one and supported using all the available means or tools, including *transactions in the foreign exchange market*. Please note that this is the aim that the Central Bank has established itself. That means that the Central Bank is in a position to change this aim.

The subject matter of the article is stabilization of the local currency exchange rate. And fixing is of interest to us only because this is the highest degree of the exchange rate stability. Because, in this case, the exchange rate is a fixed (or almost a fixed) value. Having figured out the technology of fixing the exchange rate, we would get an insight into how the exchange rate can be stabilized.

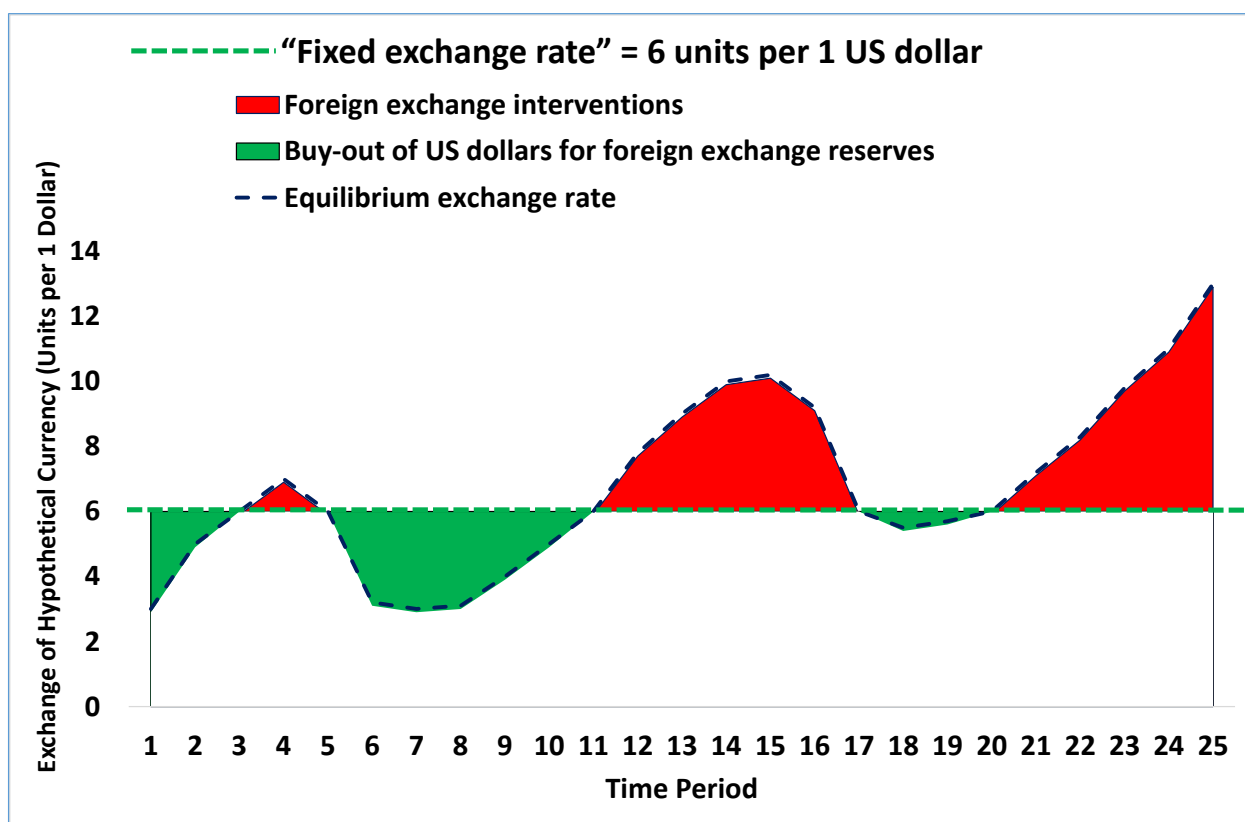
In the case of fixing, the current exchange rate coincides with the equilibrium exchange rate at certain points in time only, as the clock «which has stopped» (which has broken down) tells you the right time twice a day».

All the rest of the time, the actual exchange rate is either stronger than the equilibrium exchange rate («over-strengthened» Ruble), or weaker than the equilibrium exchange rate («over-weakened» Ruble). The fixing of the exchange rate during such periods is achieved by means of interventions of the Central Bank in the foreign exchange market both in sales of foreign exchange (in the case of «over-strengthened» Ruble), and in purchase of foreign exchange (in the case of «over-weakened» Ruble), as reflected in *diagram 2*.

³ At a certain moment, the raising of interest rates may, on the contrary, cause the currency to weaken. For example, after the Central Bank raised interest rate on December 16-th 2014, the Ruble, on the next day, fell down to its historical minima.

⁴ There are many varieties of exchange rate fixation. For example, an announcement may be made of a specific value of the exchange rate maintained by the Central Bank, or some «corridor», i.e. a range within the framework of which the exchange rate may move freely. There are other varieties of fixation, too. For example, «corridors» may be of inclined type, that is such as allow the exchange rate, within the framework of this corridor to smoothly weaken (example is Russia between August 1995 and July 1998) or smoothly strengthen (example is Russia between January 2003 and July 2008)

Diagram 2. When the exchange rate is fixed, the Central Bank alternates between buying up and selling off US dollars (foreign exchange reserves) in the market, depending on the position of the equilibrium exchange rate in relation to the fixed one.



Source: the diagram has been designed by the author. *Explanation of the diagram:* if, with the fixed exchange rate, the local currency is weaker than it was with the equilibrium exchange rate (market forces are aimed at making the local currency stronger), the Central Bank buys up foreign exchange (replenishing the foreign exchange reserves), that is the green zone of the graph. If, with the fixed exchange rate, the local currency is stronger than with the equilibrium exchange rate (market forces are aimed at weakening the local currency), the Central Bank is carrying out foreign exchange interventions (spending the foreign exchange reserves), that is the red zone of the graph.

The fixing⁵ of the Ruble's exchange rate during 1995-1998 can serve as an example from the Russian economic history. Initially, the Central Bank had been battling against the strengthening of the Ruble; the Central Bank had been mainly buying up foreign exchange which would have corresponded to the green area in Diagram 2. Then, starting from the second half of 1997, the Central Bank was chiefly combatting the weakening of the Ruble; foreign exchange from the reserves and even from the stabilization loans provided by the IMF was being sold to shore up

⁵ To be quite precise, the Ruble's exchange rate had been smoothly weakening from RUR 4.52 to 6.22 per US dollar since July 1995 until July 1998 respectively.

the Ruble. This continued until August 1998. This would have matched the red area in Diagram 2.

It is important to point out one difference. If the Central Bank, for example, changes the interest rate, it influences the equilibrium exchange rate. Whilst, if the Central Bank carries out interventions, it does not change the equilibrium exchange rate in the process, it only tries to keep the actual exchange rate «by force» from drifting to the equilibrium level.

EXCHANGE RATE STABILIZATION – KEY APPROACHES

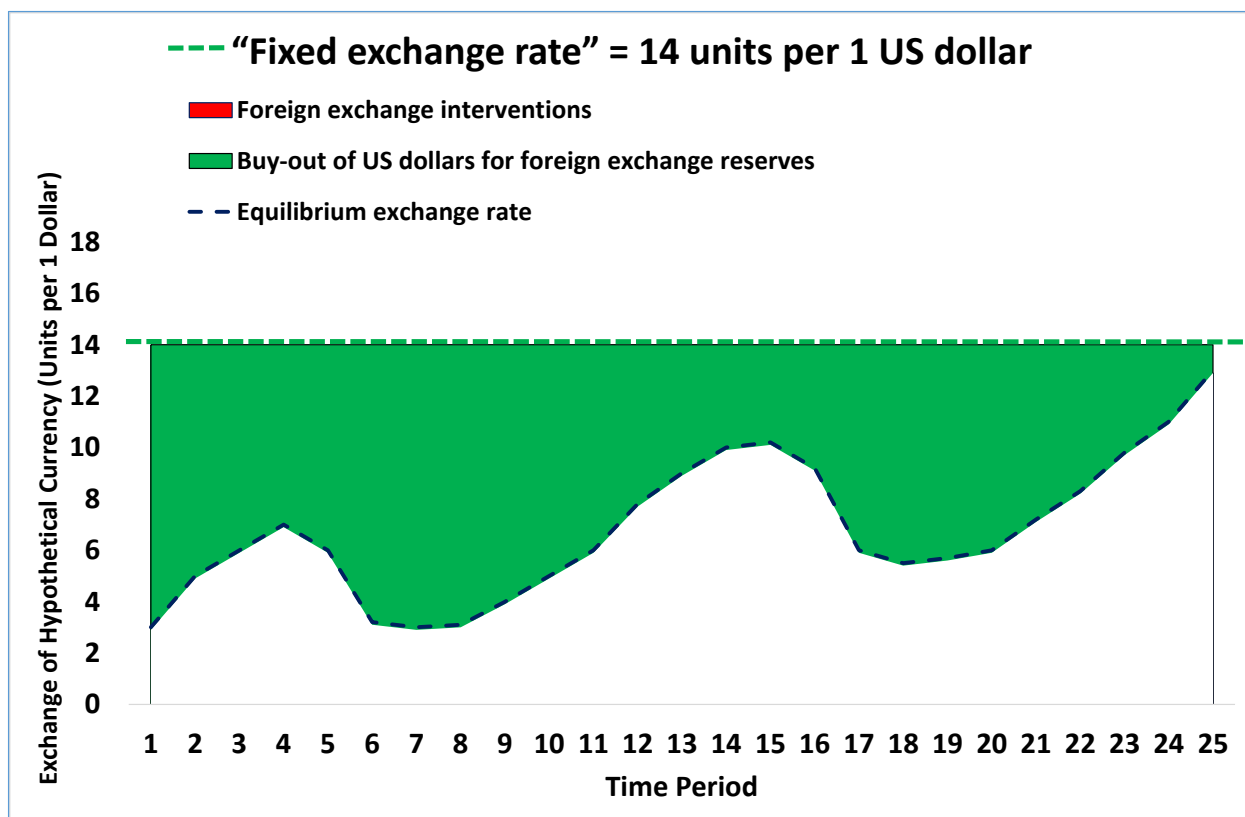
What Determines the Strength or Weakness of the Central Bank's Position

Diagram 2 shows a situation whereby the Central Bank alternates between buying up foreign exchange and selling it off. However, since the target fixing level is up to the Central Bank to decide, it can set this level within a wide range. Situations are also possible whereby the Central Bank is acting in one single direction: either it sells off foreign exchange, or, on the contrary, it only buys it up. It depends on the target fixing level chosen. The “strength” or “weakness” of the Central Bank's position is also dependent on the choice of the fixing level.

Fixing the «Over-Weakened» Ruble is the Central Bank's Strong Position

If, for fixing the Ruble (local currency), the exchange rate has been chosen which is considerably lower than the equilibrium exchange rate, in that case the market forces will be trying to make the Ruble (or another local currency) stronger. And the Central Bank will be constantly dumping Rubles in the market in order to rein this strengthening in. In the process, the gold and foreign exchange reserves will be continuously replenished (*Diagram 3*).

Diagram 3. While protecting the «over-weakened» Ruble from strengthening, the Central Bank «is forced» to issue rubles and to buy up dollars to replenish gold and foreign exchange reserves.



Sources: the diagram has been designed by the author. *Explanation: the equilibrium exchange rate is the same as in Diagram 2. The fixing exchange rate is weaker (14 units to 1 US dollar instead of 6 units). There is no need for foreign exchange interventions*

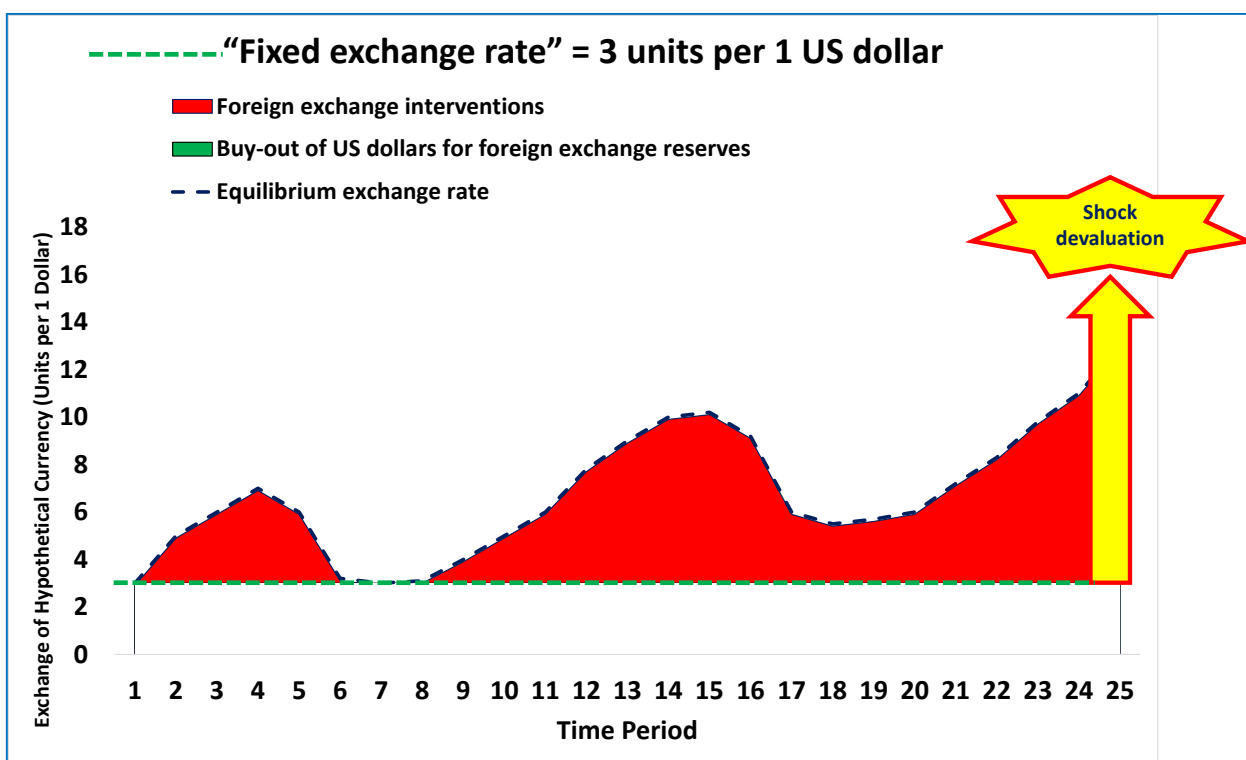
The Central Bank is able to maintain the local currency weaker than at the equilibrium exchange rate practically endlessly. And it does not need to spend foreign exchange for that purpose. It would only take for it to switch on the hypothetical «printing press» at the right time, to buy up foreign exchange and replenish the gold and foreign exchange reserves with the cash it has bought up. In other words, ***the Central Bank's capability in its fight against the strengthening Ruble (the local currency) is infinite. In this effort the Central Bank has a strong position.***

Example: in September 2011, the Central Bank of Switzerland announced that it would not tolerate the Swiss franc to the Euro exchange rate any stronger than CHF 1.2 to EUR 1, and continued to hold it at this level until January 2015. In the meantime, Switzerland's gold and foreign exchange reserves increased by more than 200 bn. in the US dollar equivalent.

Protecting the «Over-Strengthened» Ruble is the Central Bank's Weak Position

On the contrary, if the exchange rate chosen for fixing is significantly higher than the equilibrium exchange rate, then the market forces would be seeking to weaken the Ruble (the local currency). And the Central Bank would have to spend gold and foreign exchange reserves continually in an effort to hold the exchange rate. To be more exact, foreign exchange reserves would continue to be spent until depletion or until the Central Bank abandons its policy of fixing the exchange rate for other reasons (*Diagram 4*).

Diagram 4. Protecting the excessively strong Ruble from weakening leads to the reserves being spent. Failure to protect the exchange rate (for example, as a result of reserves depletion) would result in the shock devaluation of the currency.



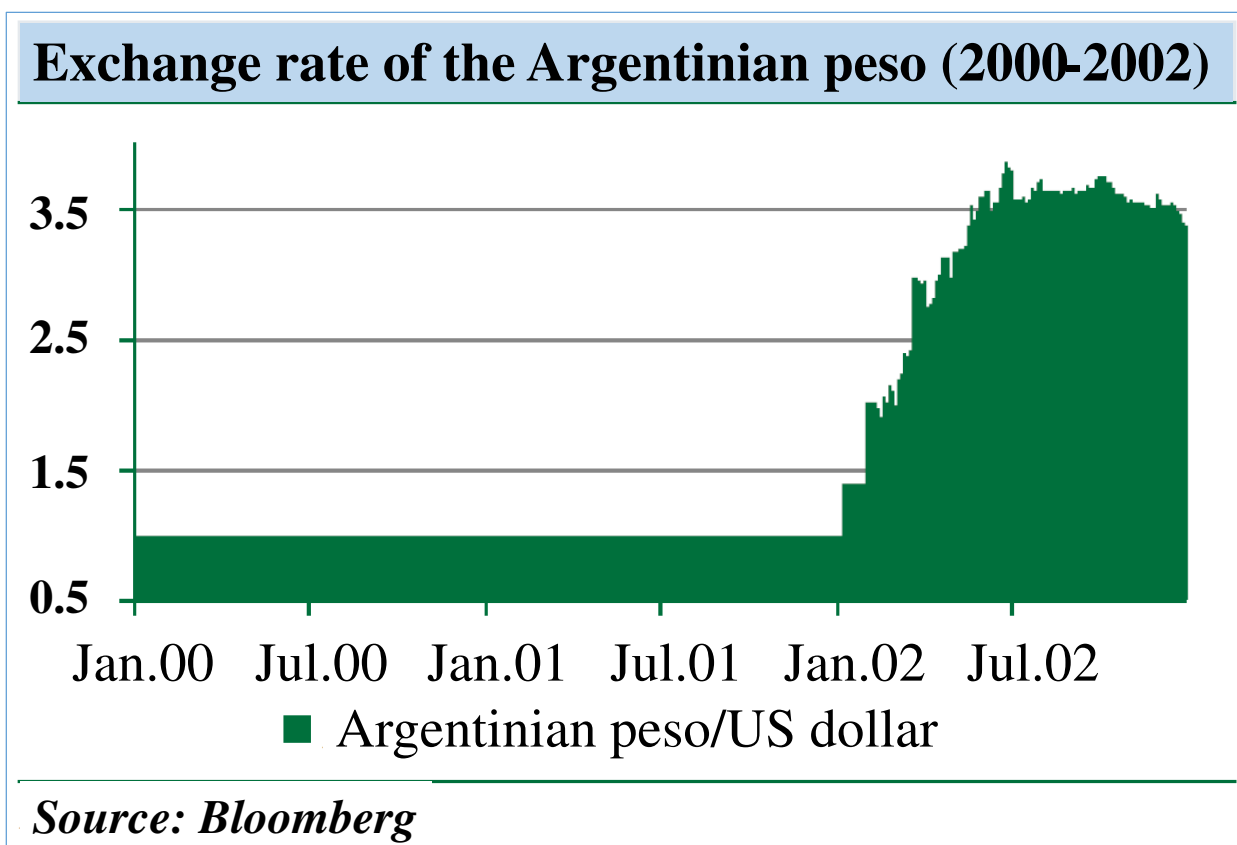
Source: the diagram has been designed by the author. *Explanation: the equilibrium exchange rate is analogous to Diagram 2. The fixing rate is higher (3 instead of 6 units to 1 US dollar). There are no opportunities for US dollars to be bought up into foreign exchange reserves. The yellow vertical arrow shows the «shock» devaluation in case the Central Bank gives up propping up the exchange rate.*

If the Central Bank gives up fixing the exchange rate for some reasons, then the actual exchange rate by leaps and bounds shifts towards the equilibrium rate (the yellow arrow upwards in Diagram 4).

Fighting against the weakening of the Ruble (the local currency), an attempt to hold on to a higher exchange rate in relation to the equilibrium exchange rate is the frequent cause of financial problems. *Graph 2* illustrates devaluation of the local currency after a long period of fixing based on Argentina's example.

Events unfolded according to a similar scenario in Russia in 1998. After holding the exchange rate for a long time at the level of approximately six rubles to the dollar, the Central Bank abandoned the propping up of the Ruble and that brought about its «shock» devaluation.

Graph 2. The exchange rate of the Argentinian peso collapsed after the policy of pegging it to the US dollar failed.



Source: «[Fixed Exchange Rate of the Ruble: pro et contra](#)» (Macro-economic Studies Center of Sberbank, 2014).

When an attempt is made to hold on to the overvalued exchange rate of the Ruble (the local currency), the gold and foreign exchange reserves give out quite rapidly. When the gold and foreign exchange reserves are exhausted, it becomes impossible to maintain the overvalued exchange rate, and, as a consequence, shock devaluation happens. ***The Central Bank's capability to counter the weakening of the Ruble (the local currency) is limited. In such a battle, the Central Bank has a weak position.***

It does happen, and that happens by far less often, that the authorities are aware of the detrimental impact of foreign exchange interventions on economic growth (foreign exchange interventions culminate in the phenomenon which is extremely negative for the economy, i.e. contraction of real money supply, please see below the section «Stabilization of Exchange Rate and Economic Growth»), or they feel they must save rather than «burn up» the gold and foreign exchange reserves. And

then they give up supporting the overvalued exchange rate of the Ruble earlier and with less damage to the stability of the exchange rate and the economy.

In the diagrams (from No. 2 through No. 4), the equilibrium exchange rate is the same while the fixing rate is different. As we can see, the ultimate result greatly depends on correctness of the fixing levels (boundaries) chosen for protection.

Summarizing, let us conclude that in the case of the Ruble's floating exchange rate (the local currency's exchange rate) the Central Bank's position is always «neutral». While, when the exchange rate is fixed, the Central Bank's position may be both «strong» (if the Central Bank is buying up the dollars), and «weak» (if the Central Bank is forced to sell off the dollars). “

Table 1. Central Bank's Strong and Weak Position

	Battling Against the Weakening of the Ruble	Battling Against the Strengthening of the Ruble
Market trend	Ruble is weakening	Ruble is strengthening
Focus of interventions	Sale of foreign exchange	Sale of Rubles
Resource for interventions	Foreign exchange (limited)	Rubles (unlimited)
Impact on money supply	Money supply contracts	Money supply expands
Impact on the economy	Economy is suppressed	Economy is stimulated
Central Bank's position	Weak	Strong

Source: designed by the author

Key Rule for Exchange Rate Stabilization

We have considered the key points, which determine strength and weakness of the Central Bank's position. We have inferred from them that in order to stabilize the exchange rate, the Central Bank has to be always in a strong position. This is the key rule for exchange rate stabilization.

Key Rule for Exchange Rate Stabilization:
The Central Bank has to be always in a strong position

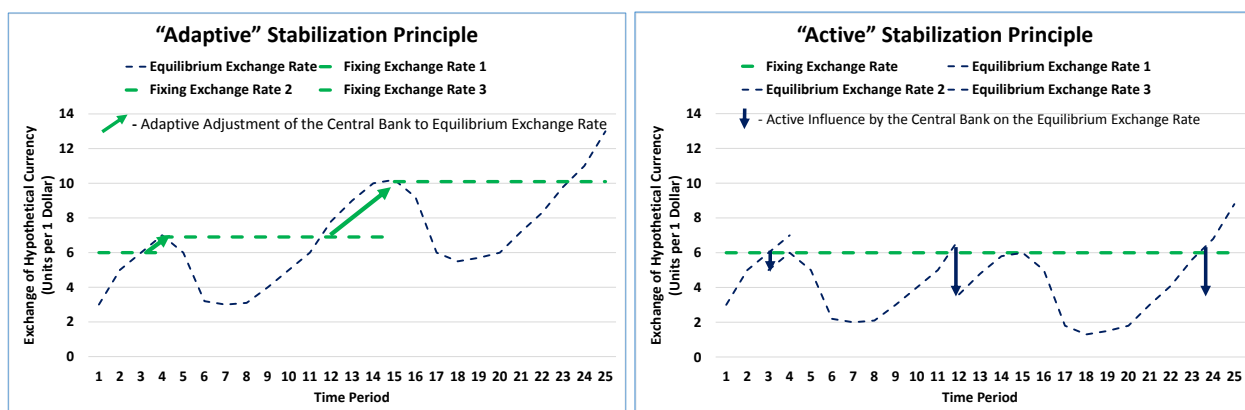
In order to stabilize the exchange rate and to stay in a strong position at the same time (in accordance with the key rule), the Central Bank can use two approaches: adaptive and active approaches (*Diagram 5*).

Adaptive Method of Stabilization – this is the change by the Central Bank of its target levels of fixing the exchange rate depending on the changes in the external environment. The aim being to stay in a «strong position». For that purpose, the Central Bank «moves» the target level (the green dotted line in the left hand graph of Diagram 5).

Active Method of Stabilization – this is an attempt to influence the equilibrium exchange rate. The aim being the same, i.e. seeking to remain in a «strong position». For that purpose, the Central Bank (without interventions!) will be trying to shift the

equilibrium exchange rate (the blue dotted line in the right hand graph of **Diagram 5**).

Diagram 5. In order to retain a strong position, the Central Bank may either change the target fixing exchange rate (left hand part of the Diagram, the green line offset upwards), or may influence the equilibrium exchange rate, (right hand part of the Diagram, the blue line offset downwards).



Source: the Diagram has been designed by the author. *Notes: Despite the differences, the principle is the same: the green line must be higher than the blue one. Please be reminded that in the active stabilization scenario, the Central Bank strives to influence the equilibrium exchange rate while foregoing use of interventions.*

General rule. Despite the differences, both methods are based on the key stabilization rule set out above. In **Diagram 5** observance of the rule means, that the green line cannot be below the blue one.

Metaphorically it can be pictured in your mind's eye that the gap between the lines corresponds to the degree to which «the doors are flung open wide» for inflow of money into the country. The wider the gap the better. The more Rubles flow into the economy, making sure that it grows, the more foreign exchange «ends up» in the gold and foreign exchange reserves.

Let us consider these stabilization methods in greater detail.

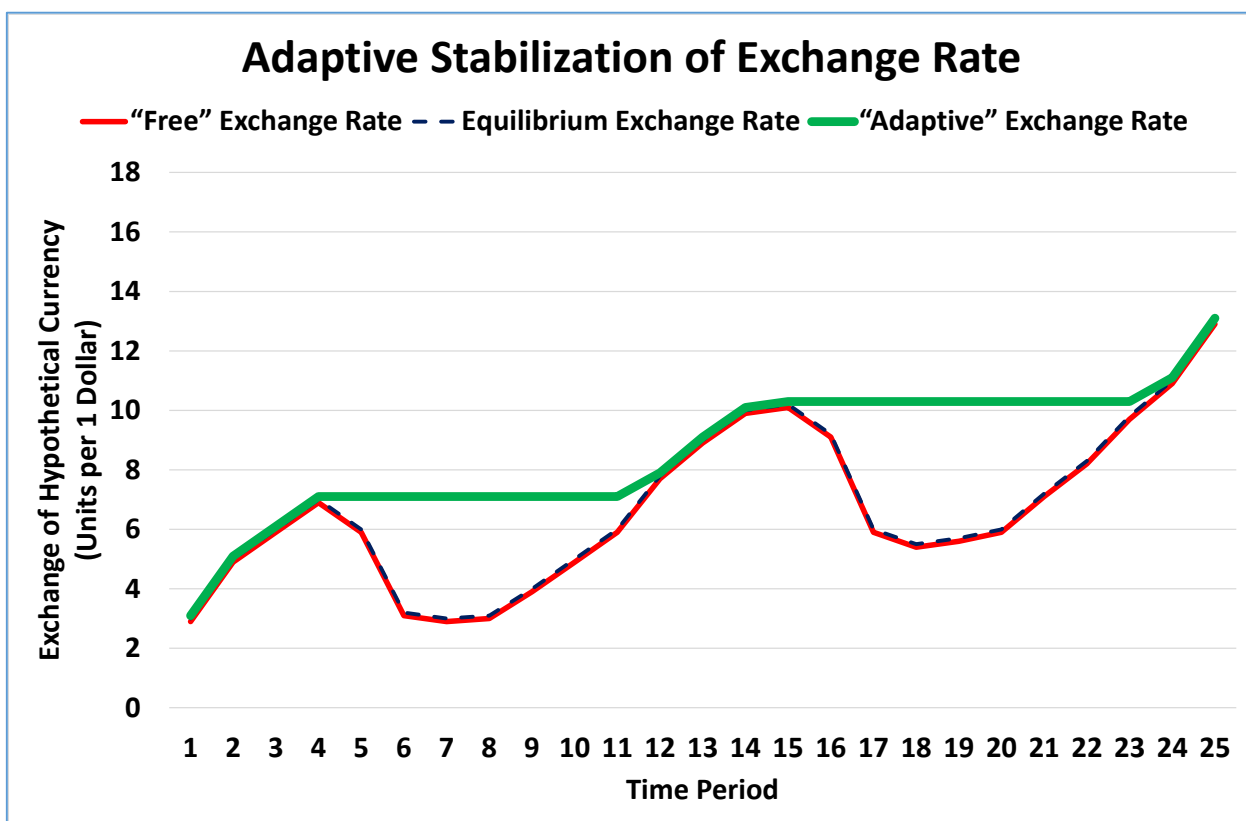
Adaptive Method of Stabilizing Exchange Rate

The adaptive method of stabilizing exchange rate (unlike the active one which will come under consideration below) has been named thus because within the framework of this approach the Central Bank is only adapting itself to the market conditions which have developed.

While, at the same time, the Central Bank carries out operations in the open market only in case it finds itself in a strong position, that is it is fighting against the strengthening of the Ruble (the local currency). To put it in simple terms, the Central Bank only buys up foreign exchange, but never sells it off. As a result, volatility is reduced, foreign exchange rate fluctuations abate. And this goal is very easy to

achieve: from the exchange rate trend pattern, the phase of the local currency strengthening is eliminated. (*Diagram 6*)

Diagram 6. The Central Bank, in the case of adaptive stabilization of the exchange rate, does not tackle the weakening of the Ruble, instead it tackles its strengthening. In this fashion, the Central Bank avoids the «weak position» and (almost) always takes a «strong position», while volatility of the exchange rate alleviates.



Source: the Diagram has been designed by the author.

Basic Algorithm of Adaptive Stabilization

Let us present the Central Bank's actions in the form of an algorithm.

Algorithm No.1 (Basic Algorithm of Adaptive Stabilization).

1. The Central Bank allows the Ruble (the local currency) to weaken.
2. The Central Bank does not allow the Ruble (the local currency) to strengthen.

The Central Bank's actions are similar to the famous expression «Let everyone in, do not let anyone out». In our case, dollars (foreign exchange) are permitted entry into the Central Bank's reserves, exit from the reserves is denied.

Analogues from Nature and Technology

Similar principle is common in nature and technology. Let us examine several analogies.

Charger

When we charge our cell phone or tablet from our house power outlet, every time we encounter alternating current – to – direct current conversion, with direct current being, of course, necessary to charge re-chargeable batteries. The process of converting «volatile» alternating current into «stable» direct current is called rectification, while the corresponding devices are referred to as rectifiers. Underlying «rectification» of current is the use of a special instrument, the diode, which is dealt with in a course of physics in high school. A diode admits current in one direction only and does not admit it in the other direction. Thus, in our case, for example: to «rectify» the trend pattern of the exchange rate, the Central Bank allows the exchange rate to move in one direction and does not allow it to move in the other direction.

Pump

A similar principle is used in pumps, for instance, in a hand pump for bicycle tires. A special device in the pump, a valve, allows air to move only in one direction⁶. Otherwise, with the pump piston moving one way, the air from the pump would be forced into the tire, and with the piston moving the other way, the air would return into the pump and the tire would never get inflated. If the valve is used, then, instead of variable and «volatile» air flow (into the tire and out of it) we achieve a constant, stable flow of air, which does useful work aimed at inflating the tire. The same way, the heart valves or vein valves allow blood to flow only in one, correct direction.

Constrictor

A constrictor does likewise when it kills its victim. Having encircled the victim's body with tight rings, it waits. It does not let its prey inhale but it lets it exhale. When the victim, trying to breathe, issues another exhalation, the constrictor compresses its body still more tightly. At the end of the day, the victim suffocates. In our example with the currency exchange rates, the victim is volatility, exchange rate fluctuation. The phase of the Ruble's (the local currency's) strengthening for volatility is analogous to «inhalation». But the Central Bank, using the adaptive stabilization method, does not let volatility «breathe in», and this way it «strangles» it.

Other Analogies

Not letting the Ruble's exchange rate strengthen is like not letting an athlete run before taking a long jump, let him jump from stationary position only instead. Or it is like not letting a woodcutter swing his axe to chop off a tree bough and only letting him press the axe blade on this bough. Lack of strengthening (as an equivalent to swinging, running) in itself attenuates the impulse of the subsequent weakening of the Ruble's exchange rate.

Resorting to military terminology, we can say that adaptive stabilization of the exchange rate consists in the Central Bank «not involving itself into the battle»,

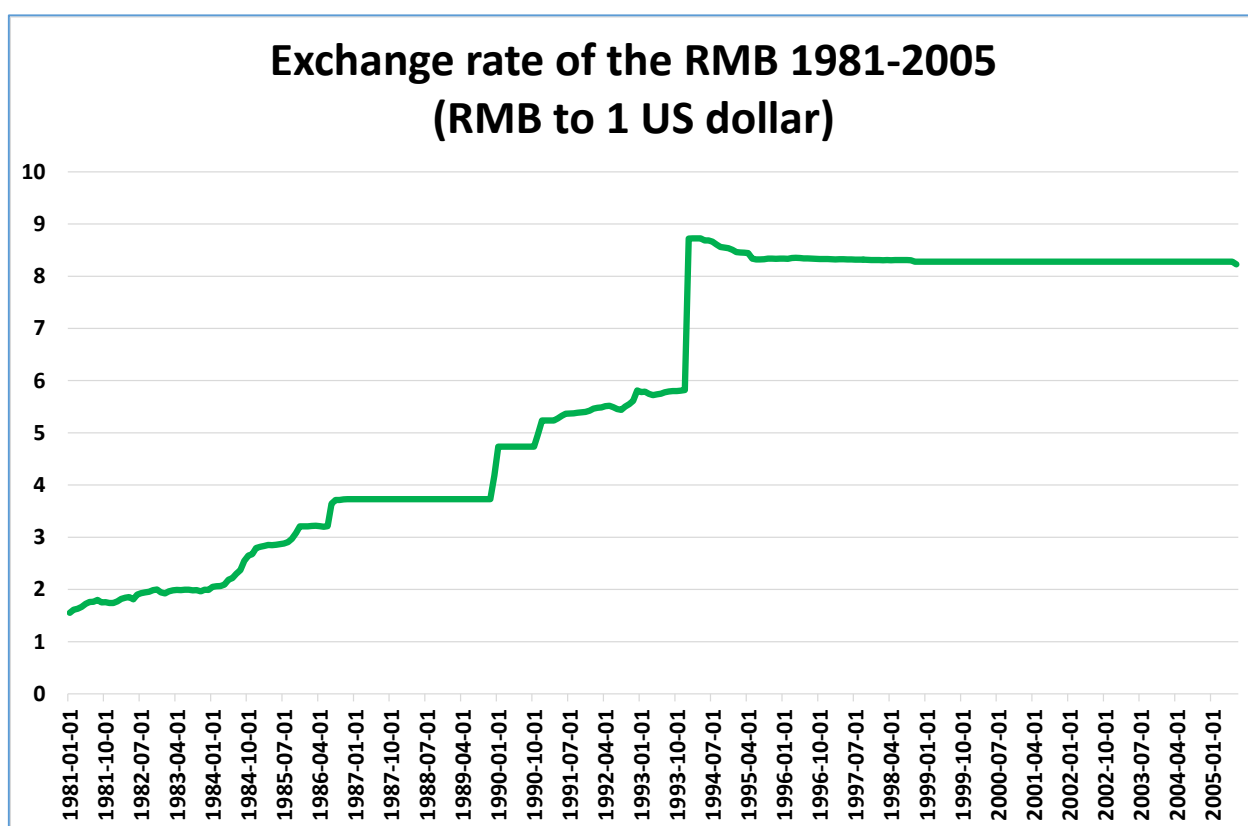
⁶ In the tire itself, another valve, a nipple, serves the same purpose.

when its positions are weak. However, having beaten a retreat to advantageous positions, it sticks firmly to them.

The Chinese Example

It is entirely possible that somebody may find the stabilization method proposed to be far-fetched. But this is actual practice followed by many Central Banks in the world (see the example of the Swiss Central Bank's practice above). This is exactly the course of action which has been followed by the People's Bank of China for many a decade (*Diagram 3*).

Graph 3. The Bank of China has been successfully using the adaptive method of stabilizing the RMB for many years. This is one of the chief reasons for China's economic success record.



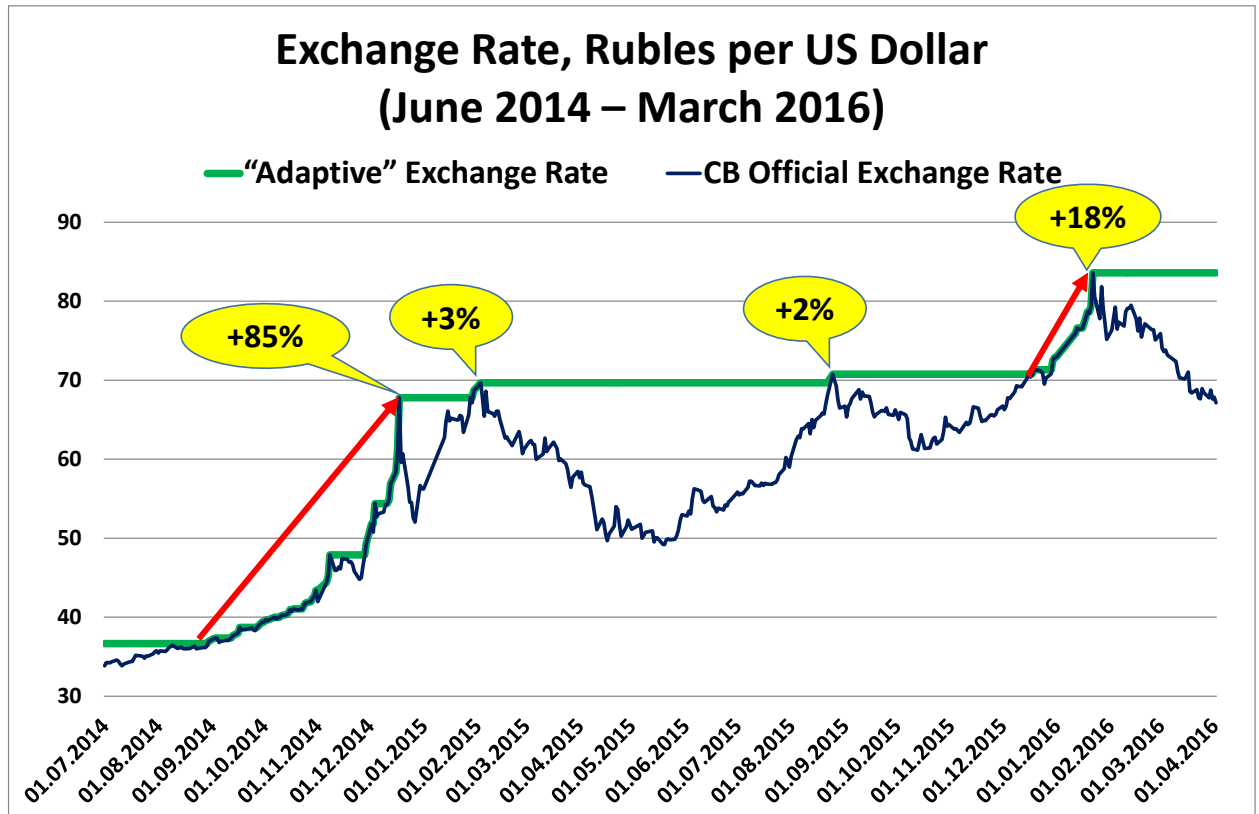
Source: [FRED](#)

As can be seen from the graph, adaptive stabilization does not signify continuous weakening of the currency. The graph shows lengthy periods of stable exchange rate. For example, the exchange rate of the RMB was stable from September 1986 through November 1989 for a space of 38 months (more than three years). However, the record in duration of stable exchange rate was set when this period lasted from February 1994 through June 2005 (more than 10 years!).

In other words, adaptive stabilization does not mean continuous weakening of the Ruble's (the local currency's) exchange rate, instead it leads to stabilization of the exchange rate over long time periods.

What would the Ruble's exchange rate have been like if adaptive stabilization had been used? This is vividly illustrated in *Graphs 4 and 5*.

Graph 4. The Central Bank could have ensured stabilization of the exchange rate, having eliminated the periods of the Ruble's strengthening during the last two years.

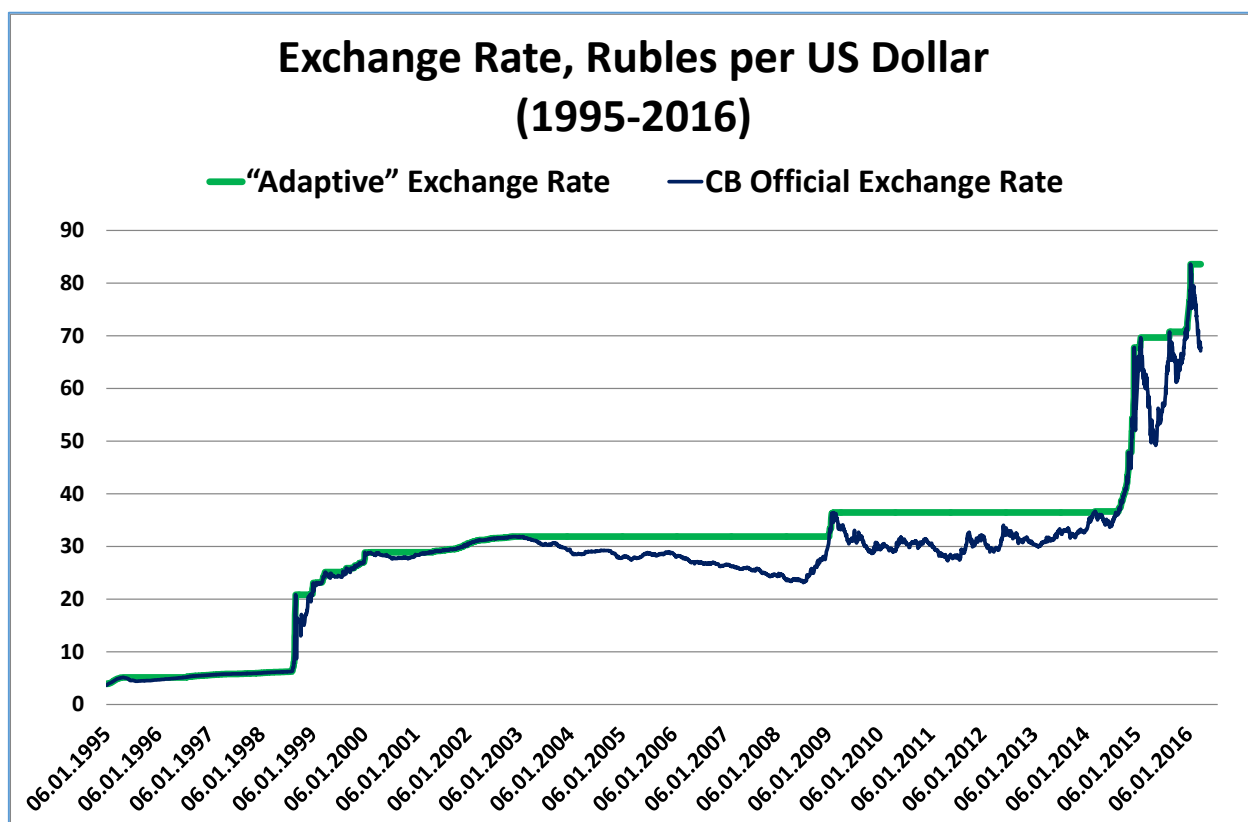


Source: Central Bank of the Russian Federation, the author's calculations. Compare with Graph 1.

As can be seen from Graph 4, using the adaptive stabilization strategy, it would have been possible to ensure that the Ruble's exchange rate was virtually stable within the range between RUR 68-71 to one US dollar. This is in stark contrast to the «foreign exchange see-saw», which was to be observed in actual fact and is marked with a red line (see also Graph 1).

Such a situation has been characteristic of not only the last few years, but of more than 20-year long history of the exchange rate (*Graph 5*).

Graph 5. Using the adaptive stabilization method would have enabled the exchange rate fluctuations to be eliminated in the past as well.



Source: Central Bank of the Russian Federation, the author's calculations.

As can be seen in Graph 5, the Ruble's exchange rate could have been extremely stable from late 2000 through late 2014 (14 years). From the benchmark of RUR 27.8 to the dollar, the exchange rate would have experienced only two steps in its change: up to RUR 32 (by 15%) by December 2002 and up to RUR 36 (by 13%) by February 2009.

In this case, the country would not only have built up its foreign exchange reserves. Additional trillions of Rubles would have been injected into the economy.

However, given the correct policy to be steered by the Central Bank and the Finance Ministry, these Rubles would not have become the cause of inflation. On the contrary, being bound up, for example, by long term bonds of the Government and the Central Bank, they would have turned into "long money" that the Russian economy so desperately needed.

Moreover, it is entirely possible that under such a scenario, the sharp devaluation which happened in December 2014 would not have transpired, at all. First off, adaptation to changes in the external market situation would have proceeded proactively rather than with delays due to the Central Bank's interventions. Secondly, in such a scenario, the Central Bank's gold and foreign exchange reserves could have exceeded 1 trillion US dollars which would have inspired greater trust of

the general public as well as of the external and domestic investors for the Ruble and Ruble denominated assets.

Other Algorithms

Let us refer to two more varieties of the basic algorithm for adaptive stabilization described above.

Algorithm No.1.1 (Step-Wise Weakening). In basic algorithm No.1, the Central Bank's position is only strong during the tendency for the Ruble strengthening. In the case of the Ruble getting weaker, the exchange rate is similar to freely floating one, and the Central Bank's position is «neutral» (not weak, but not strong, either). Such a neutrality has its downsides. Smooth weakening of the local currency inevitably results in more and more people and organizations trying to get rid of it.

The following is what Sergey Aleksashenko, in December 2014, [wrote](#) about such a situation (2014): *«But it is precisely those who are today giving in to panic, are indeed determining what has been happening to the Ruble. Somebody, cursing themselves, on account of having failed to buy dollars at 40-50-60, is rushing to buy them at 70. And somebody else, cursing themselves for having sold the dollars at 40-50-60, has pledged to avoid selling it below 100. As a result, the Ruble has been roller coasting downhill and it is not clear where it will have a rally and when»* (see also «[Negative Consequences of Smooth Devaluation](#)», Blinov, 2016a). To avoid such an effect, algorithm No.1.1. can be used. It presupposes that the Central Bank is to be in a strong position at all times (not only the «weak», but also the «neutral» position is excluded).

1. When the Ruble tends to get stronger, the Central Bank deters the exchange rate from such a strengthening.
2. When the Ruble tends to get weaker beyond certain range (say, 3%), the Central Bank performs a one-off weakening of the exchange rate by an amount of up to 18-20%. Such a weakening does not become critical for the majority of economic agents but it radically stems the inflow of those wishing to sell Rubles and buy dollars.

Kazakhstan, February 2014 (Example of adaptive stabilization, Algorithm No.1.1). Before November 2014, Kazakhstan, in the foreign exchange market, had been actually conducting a policy of adaptive stabilization per Algorithm No.1.1 (see, for example, [Farchi, 2015](#)). In the case of pressure brought to bear on the exchange rate, the tenge instantly devalued approximately by 20%⁷. This is exactly the kind of episode that happened in February 2014 and it is illustrated in **Graph 6**.

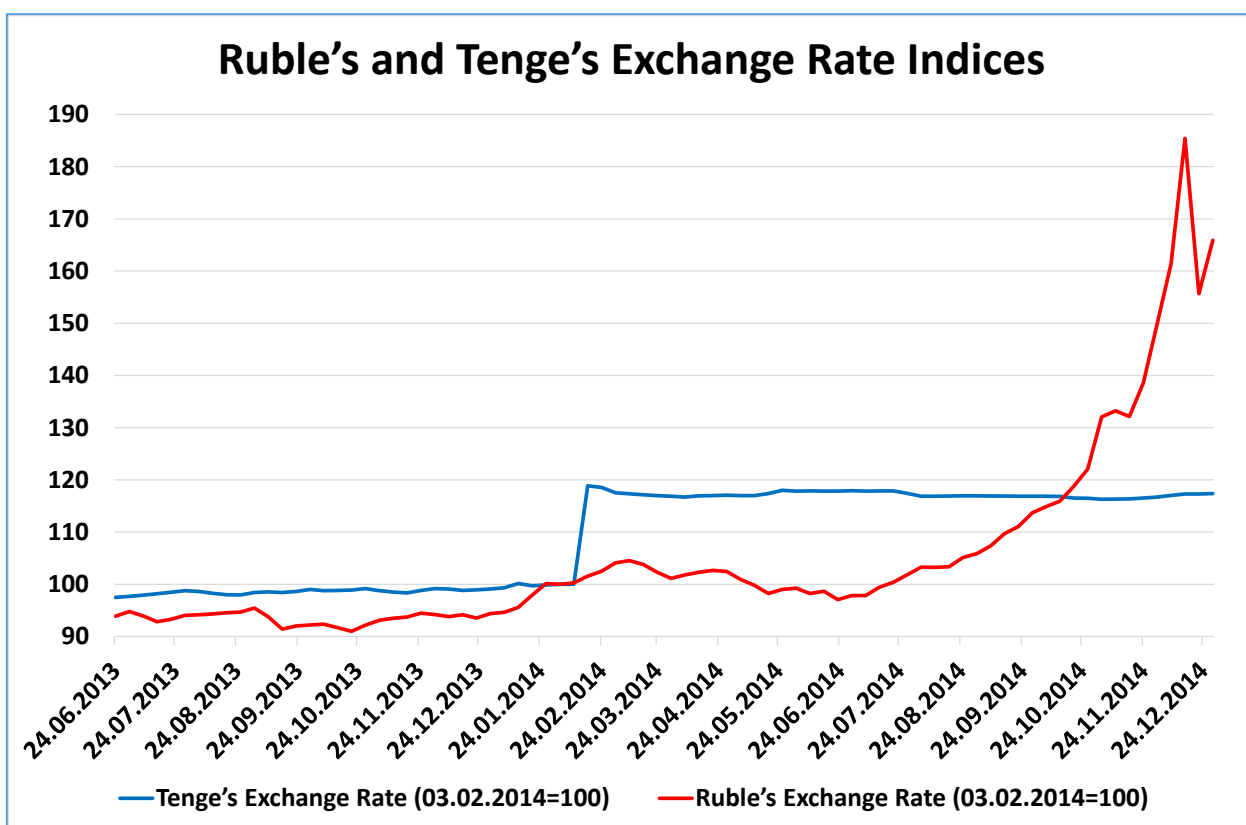
⁷ It is noteworthy that after each such weakening, the National Bank of Kazakhstan again found itself in a «position of strength». In the episode described by us, this «position of strength» of the National Bank of Kazakhstan is confirmed by the country's growing foreign exchange reserves (for Kazakhstan these are the international reserves and assets of the National Fund of the Republic of Kazakhstan) from USD 97 to 105 bn. between February and November 2014.

Such step-wise weakening within 20% is good also due to the fact that one of the most sensitive phenomenon concomitant to devaluation, i.e. inflation, manifests itself in a less pronounced manner.

The tenge was then devalued by 18%. Inflation was not so high then. Even importers, in such cases, do not rush to rewrite their price lists, fearing, in particular, that they might lose their market share. Maximum inflation was in February (1.7%) and in March (1%). Afterwards, up until December 2014, monthly price rises never exceeded 0.6%. In annualized terms, maximum inflation amounted to 7.4% only (September 2014).

In Russia, which did not use the adaptive stabilization strategy, and the surge in the exchange rate proved to be higher (which is visible in the same Graph 6), inflation raged much more vehemently. On a monthly basis, it reached 3.9% (January 2015), while on an annual basis, it was 16.9% (March 2015).

Graph 6. In 2014, step-wise devaluation in Kazakhstan enabled great fluctuations in the exchange rate to be avoided. In Russia, owing to «smoothness» of devaluation there was a run on foreign exchange in the foreign exchange market and the Ruble weakened almost twice.



Source: [Finam](#), the author's calculations (average prices for the week from June 2013 through December 2014 are given).

It can be concluded that, in the case of the adaptive strategy, the weakening of the local currency occurs by a smaller amount. And there is another reason for which inflation caused by reduction in the exchange rate manifests itself to a lesser degree.

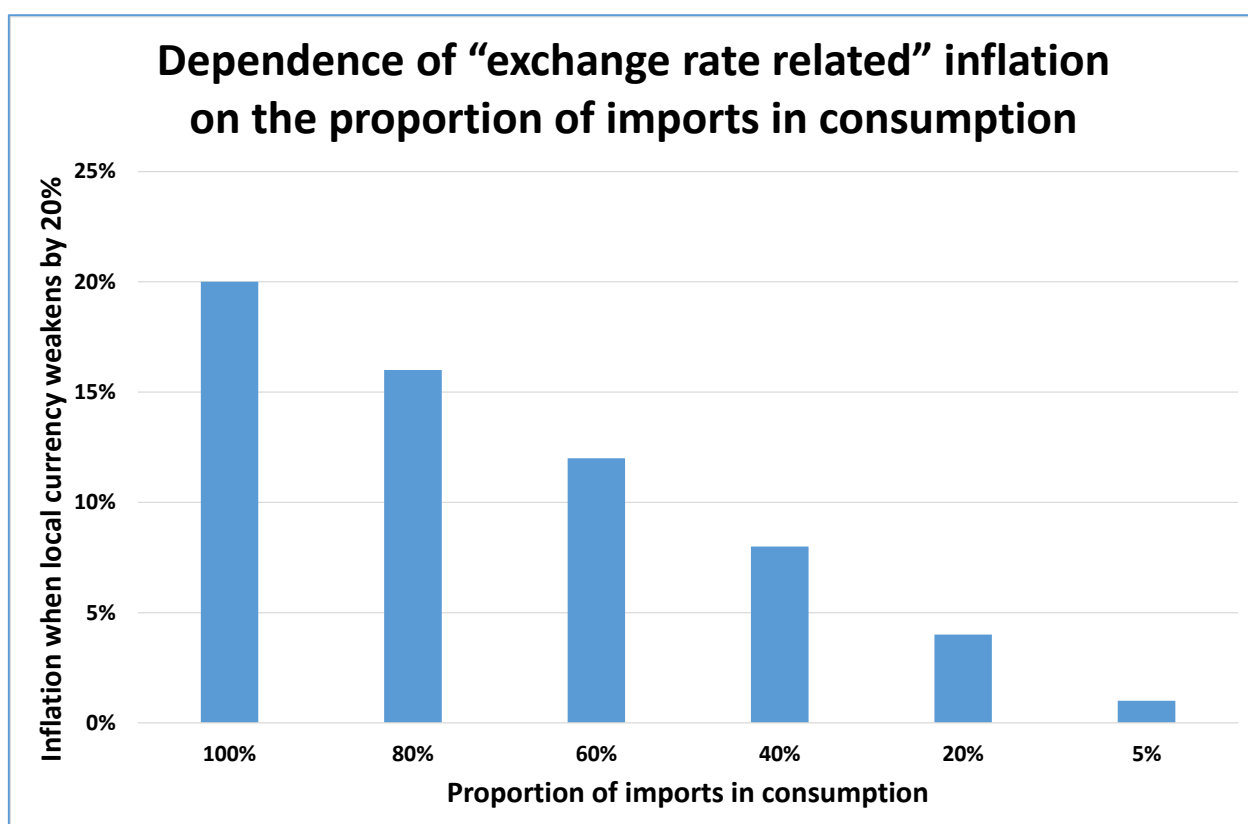
There is also another reason why step-wise devaluation results in a lesser cumulative weakening of the Ruble's exchange rate (the local currency's exchange rate). The point is that price increases in the course of devaluation are heavily dependent on the proportion of imports in consumption.

Having recourse to a medical analogy, one can say that regularly taken pills (step-wise devaluation) cure the sick person, while a whole handful of the same pills taken at a time (shock devaluation) may kill the same person.

Another medical simile: step-wise devaluation, implemented in proper time, is akin to diagnostics and treatment for an oncological disorder at an early stage. And such a treatment avoids causing harm to the patient. While if the disease is far gone, the treatment may require the sick organ to be amputated or may turn out to be impossible.

Illustration of this can be seen in *Diagram 7*.

Diagram 7. Influence of devaluation on inflation (with other factors being equal) is the greater, the higher the proportion of imports in consumption is.



Source: the diagram has been designed by the author. Note: numbers are hypothetical.

The matter is that the weakening of the Ruble's (the local currency's) exchange rate does not exert influence only on inflation at the moment. It also exerts influence on consumption structure, with the proportion of imports in consumption decreasing. The country, in which the weakening of the local currency has taken place (or still continuing), «migrates» from the left hand part of Diagram 8, to the right hand part. The proportion of imports in consumption in such country (with other factors being equal) is declining, and the effect of dropping exchange rate on inflation is waning. This is exactly why inflation due to the weakening exchange rate of the Ruble (or some other local currency, for that matter) is of «attenuating» nature.

Therefore, the country which has step-wise devaluation is not just being proactive and is cutting back upon inevitable losses (on the path of currency weakening). It is being active in changing the structure of its consumption in advance, and inflation in the country in question becomes less sensitive to further weakening of exchange rate.

The exchange rate during «step-wise» devaluation weakens (with other factors being equal) by a lesser amount also because, instead of expending reserves, there takes place their accumulation.

In other words, in the case of exchange rate adaptive stabilization, the weakening happens to be even less than in the case of attempts «to smoothly devalue» the currency using interventions.

Algorithm No. 1.2 (smooth strengthening of the local currency is allowed). Algorithm No. 1.1 is aimed at making sure that involvement of «still wider and wider popular masses» into the process of weakening the Ruble is avoided. Whereas Algorithm No.1.2, on the contrary, utilizes the effect of «involving the masses», into the campaign of strengthening rather than weakening the Ruble. This is all a matter of smoothness of changes. With the Ruble getting stronger little by little, more and more economic agents will be interested in buying the Ruble.

In order to exploit the effect of «masses involvement», the Central Bank may refrain from preventing the strengthening of the local currency, and instead, it may let it firm up smoothly and very slowly. For example, during the year, the Ruble may be «permitted» to appreciate from RUR 84 to RUR 83 to the US dollar. Gradual strengthening of the Ruble would attract additional sellers of foreign exchange into the market. One of the main pricing rules would be practiced: «Raise the price (in our case, the Ruble's exchange rate) slowly, drop it down quickly» (Blinov, 2016a).

Other options of Algorithm No.1 are also possible. For example, the Central Bank may start combatting the strengthening of the local currency only after it has strengthened “naturally” in relation to the currency's maximum weakening by a definite amount, by 1%, for instance, rather than at the point of its maximum weakening.

One can orient oneself to the trend development of reserves replenishment. An example of such modification of the Algorithm was the following rule: «As soon as the replenishment volume of the international reserves becomes less than USD 2 bn. a week (or 5 business days), do step-wise devaluation by 18%».

Active Method of Exchange Rate Stabilization

We have described above how the Central Bank can adapt itself to the trends developing in the market and smooth out exchange rate fluctuations. But the Central Bank can do more than the above, i.e. adapting itself to the situation; it has tools to actively influence this situation. For that purpose, the Central Bank needs to leverage off the forces that push the equilibrium exchange rate towards the Ruble's strengthening.

How to Determine the Equilibrium Exchange Rate

We have pointed out above that if the Central Bank does not buy or sell foreign exchange, then it is easy to determine the equilibrium exchange rate; this is the exchange rate that exists at the moment in the market, it is the current, actual exchange rate. However, if the Central Bank carries out interventions, can the equilibrium exchange rate be known then? It is true, it is impossible to determine the equilibrium exchange rate precisely in this case. Fortunately, it is not required that the equilibrium exchange rate be determined precisely. Firstly, we can easily understand whether the equilibrium exchange rate is higher or lower than the current one. This can be determined if one knows the direction of the Central Bank's interventions.

- If the Central Bank is selling foreign exchange (buying Rubles), it means that it is battling against the weakening of the Ruble and the Ruble's equilibrium exchange rate is lower than now.
- If the Central Bank is selling Rubles (buying foreign exchange), it means that it is battling against the strengthening of the Ruble and the Ruble's equilibrium exchange rate is higher than now.

The degree to which the actual exchange rate deviates from the equilibrium exchange rate can be also assessed. This can be done (and very conveniently!) in other units, i.e. in volumes of interventions a time period. The greater the volume of interventions to support the exchange rate, the greater is the difference between the fixed (supported) exchange rate from the equilibrium exchange rate. The following phrase springs to mind immediately: «Last week, the actual exchange rate was USD 2 bn. (foreign exchange interventions a week by the Central Bank) stronger than the equilibrium one, and this week it is only 1 bn. stronger»

The Gist of the Active Approach

As we know, the exchange rate of the local currency is often impacted by the forces which do not depend directly on the actions taken by the Central Bank. For example, given that all the other factors are equal, the strengthening of the Ruble is facilitated

by high oil prices or soft monetary policy of the Federal Reserve Service (or another Central Bank, issuer of the «external currency»). However, there are such forces which the Central Bank can indeed influence. And if the Central Bank exercises its influence, it will be thus demonstrating the active approach to the exchange rate stabilization. The Central Bank, in this case, does not «knuckle under» to the changeable world, it strives to change this world itself.

Visually, the diagram illustrating the actions taken by the Central Bank in such an approach is shown in the right hand part of Diagram 5. Once the equilibrium exchange rate becomes higher than the fixing exchange rate, the Central Bank undertakes the steps which «offset» the equilibrium exchange rate curve downwards, towards the strengthening of the Ruble (the local currency). Correspondingly, the Central Bank remains in a position of strength.

It is worth mentioning that such an approach is radically different from the policy of foreign exchange interventions, which requires that the Central Bank should sell its foreign exchange reserves. Instead of spending the foreign exchange itself, the Central Bank, using various measures, «calls on» other holders of foreign exchange to spend it to purchase Rubles. To express the purpose of the Central Bank's actions quite bluntly, it has to undertake such steps as would raise foreign exchange for the country.

What capabilities to raise foreign exchange are available to the Central Bank? Let us now review some of them.

Raising Interest Rates

The simplest way of attracting foreign exchange into the country, as mentioned above, is to raise interest rates. Such a measure has been historically used since the times of the gold standard. The global «currency» at that time was gold. And if in some country, the Central Bank was confronted with the gold outflow, the raising of interest rates was the standard answer. Let us now consider several historical examples in which interest rates were raised.

USA, 1931

Ben Bernanke, ex-Chairman of the Federal Reserve Service, described such an episode in the history of the USA in one of his [speeches](#). This happened in 1931. Shortly before the British pound was devalued⁸. *«With the collapse of the pound, speculators turned their attention to the U.S. dollar, which (given the economic difficulties the United States was experiencing in the fall of 1931) looked to many to be the next currency in line for devaluation. Central banks⁹ as well as private*

⁸ Everything happened as shown in Diagram 4 of this article; after defending the pound for a long time by «gold and foreign exchange» interventions, the Bank of England went off the gold standard and, by doing so, it devalued the pound.

⁹ This is a reference to foreign (vis-à-vis the USA) Central Banks

investors converted a substantial quantity of dollar assets to gold in September and October of 1931, reducing the Federal Reserve's gold reserves...

To stabilize the dollar, the Fed once again raised interest rates sharply, on the view that currency speculators would be less willing to liquidate dollar assets if they could earn a higher rate of return on them. The Fed's strategy worked, in that the attack on the dollar subsided and the U.S. commitment to the gold standard was successfully defended, at least for the moment», (Bernanke, 2004). Bernanke refers to the raising of interest rates in response to gold outflow (external currency) as «long-established central banking practice».

USA, 1980-s

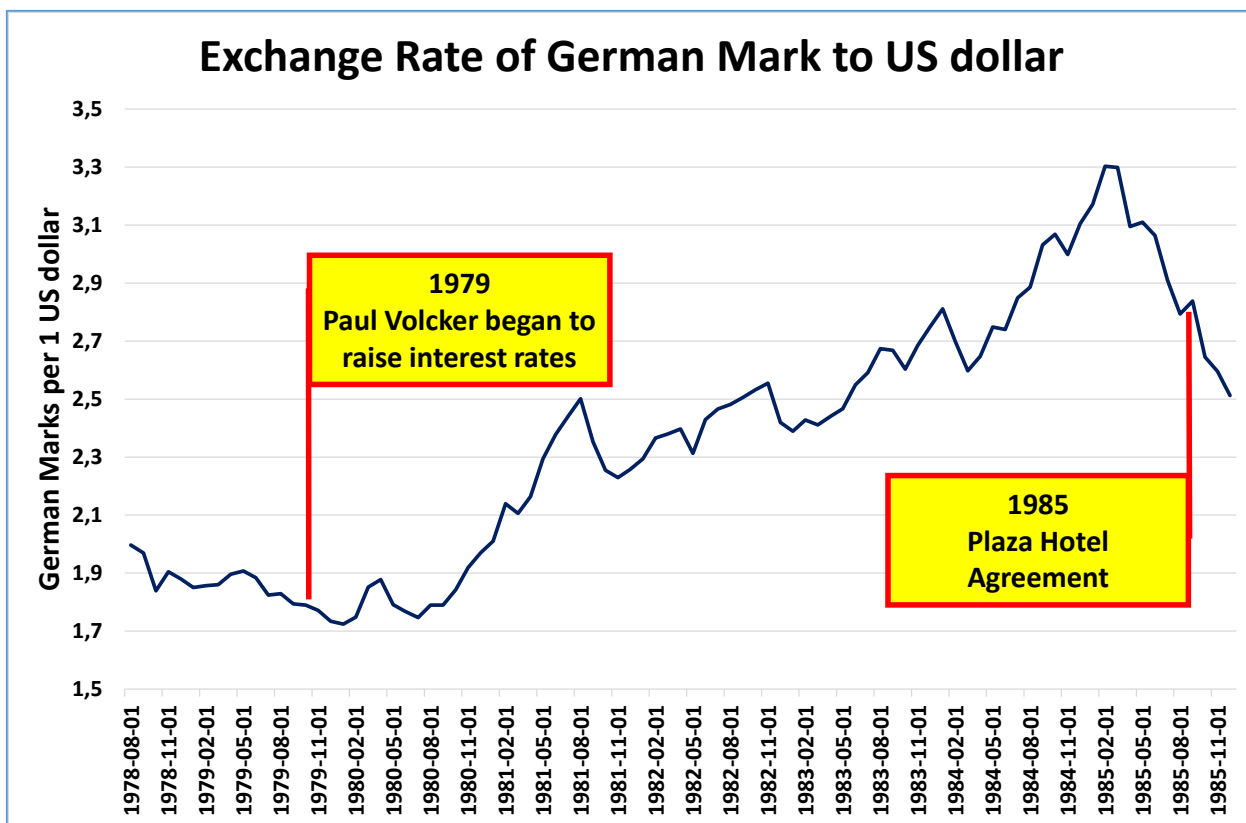
During the 1970-s, a big problem for the USA was inflation. Paul Volcker, who took over as Head of the FRS in August 1979, started fighting against it using the raising of interest rates.

By April 1980, the interest rates of the FRSC had been raised from 10% in April 1979 to 17.6%. In December 1980, the interest rates had already peaked at 19% and had been holding at such a high level practically until July 1981, following which their gradual reduction set in.

The raising of interest rates was aimed at tackling inflation and, as a result, it went down from 13.5% in 1980 to 3.2% in 1983. However, we are interested in a different aspect of it: how did the raising of interest rates tell on the exchange rate of the US currency?

As could have been expected, the exchange rate of the US dollar to other currencies appreciated. For example, while in January 1980 1 US dollar was equivalent to DEM 1.7, by early 1985, it had appreciated to DEM 3.3 (**Graph 7**).

Graph 7. The raising of interest rates in the USA caused such a sharp strengthening of the US dollar to the German mark and other currencies that it required the Governments to intervene at the inter-government level (Plaza Hotel Agreement).



Source: [FRED](#)

The strengthening took place with respect to other currencies, for example, with respect to the Japanese yen. The appreciation of the dollar started to be such a concern to the USA that in 1985, there was the Plaza Hotel Agreement. Under this Agreement, by joint efforts made by the Central Banks, deliberate weakening of the dollar to the other currencies was carried out, primarily with respect to the above mentioned German mark and the yen.

Russia, 2014-2015

Russia has also had experience like that. Battling against the weakening Ruble, the Central Bank of Russia, during December 2014, sharply raised the key interest rate from 10.5 to 17 percent. This caused the exchange rate of the Ruble to rise. During the first half of 2015, the Ruble strengthened from RUR 70 to 49 to the USD. For the sake of fairness, we should emphasize that instrumental in its strengthening were the rising oil prices (however, on the other hand, these oil price rises only compensated for reduction in the Central Bank's interest rate from 17 to 11 percent).

Basing ourselves on the international and Russian examples, we can confidently say that an increase in interest rates has a strengthening effect on the exchange rate of the local currency.

Attractive Assets

Another factor helping attract foreign exchange from abroad is availability of profitable (lucrative) assets in the country. Shares or bonds can, for example, play the role of such assets.

Shares

Rising share prices in any country attracts investors from other countries. As this is an opportunity to make money. This is exactly why growing stock markets result in capital inflow into the country, while falls of indices may cause capital outflow.

One of the reasons for vibrant growth of the US economy in the 19-th century was the capital inflow, including foreign capital, into the growing shares initially of the canals, and then the railroads, whose construction boom was observed in the USA during those years. This is how **Elena Chirkova** (2010) [describes](#) the situation with cash inflow for construction of the canal which connected the Hudson (New York) with Lake Ontario:

«In 1819, when one more part of the canal was inaugurated, there was quite an influx of investors from other states who wanted to buy the company's securities. The upsurge of interest was due to the fact that the revenues of the canal proved to be higher than expected. So much cash was raised that it was impossible to use it all for construction. Actually the canal renamed the Eri Canal by that time, had turned into an investment fund, which was using the funds collected towards purchasing bonds; it became, as the American economic historian Robert Sobel put it, «a pump of well-being» (highlighted by me, S.B.) into New York State. However, English investors, such as, for example, the Barings Bank also ramped up the purchase of securities and, by 1829, it was exactly them who had taken over the company...

In 1825, two internal projects were launched by the State of Ohio. The state was unable to raise the money inside the state. It was decided to issue bonds against the state's guarantee and to sell them to private investors in New York. During seven years, they were successful in raising USD 4.5 mn. that way. There were quite many English investors there. These canals turned out to be profitable which added to the enthusiasm. By 1833, 400 miles of canals had been constructed, crisscrossing the state, and by 1850, their total length was 1000 miles».

Please note that in both cases, along with internal investors, English people took an active part in investments. Also pay attention to the expression «pump of well-being». We will be reverting to this metaphor again.

The two railroad booms in the USA proceeded very much the same way. The first one unfolded during the 1840-s -1850-s. The importance of foreign capital inflow was evidenced by the fact that the boom ended due to the Crimean war in Europe. It caused European capitals to flow out of the USA as money was needed to fight the war. The second railroad boom dated back to the 1870-s -1890-s.

Similar examples of capital inflow into the growing stock market are plentiful in the history of other countries. In Russia, massive inflow of capital, during 2006-2008, was brought about, among other things, by fast growing stock prices; for instance, Russian Trading System Index, from June 2005 through June 2008, shot up from 700 to 2300 points, having more than trebled.

It is not difficult to understand how growing stock markets influence capital flows. But what can the Central Bank do for this growth? The Central Bank cannot directly impact the stock market growth, only indirectly, through building up money supply. Russia has had experience of a different kind as well, experience in direct government support of the stock market. The following is how [Finmarket \(2012\)](#) describes the history of VEB supporting the stock market during 2008-2009:

- «In October 2008, the government, when the stock market was precipitously falling down, decided to deposit with VEB the monies of the National Prosperity Fund in the amount of RUR 175 bn. towards purchasing securities of Russian companies. The deposit agreement envisaged that the monies of the National Prosperity Fund were to be deposited with VEB for time period until October 21-st 2013 with 7% per annum, while earnings were to be paid when the deposit duration expired.
- A year later (in December 2009) VEB repaid the deposit in full amount and paid interest at 7% per annum. According to the Finance Ministry, the amount of interest was on the order of RUR 13 bn.
- VEB, which, during the crisis, became one of the largest portfolio investors, made very good money on these transactions. The then Finance Minister Alexey Kudrin advised that placement of the monies of the National Prosperity Fund in the stock market had earned Vnesheconombank about 100 bn. Rubles' worth of profit including 30 bn. Rubles' worth of cash».

Similar actions can be taken using the money of the Central Bank itself rather than the money from the government budget. Many different schemes can be used for that purpose. Example: the Central Bank extends the Finance Ministry a credit facility against the pledge of foreign exchange assets and this credit facility is to be utilized by the Finance Ministry for the purpose of supporting the stock market per the scheme described above. There are other alternatives as well.

Bonds

When we were talking above about the «railroad booms» in the USA, we have already indicated that foreign investors invest their money willingly not only into growing stock but also into profit making bonds which are often guaranteed by the authorities.

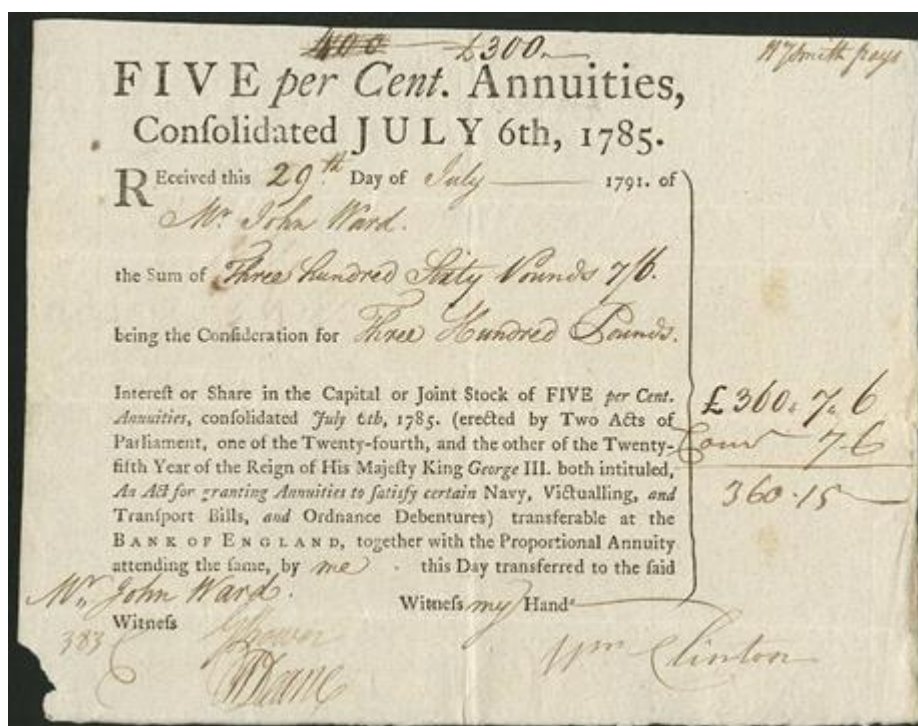
Foreign exchange inflow into bonds is very similar to the inflow resulting from interest rates raised by the Central Bank. The Central Bank's interest rate sets the general benchmarks for various interest rates in the economy. Among other things,

it is also on the Central Bank's interest rate that return on the bonds depends. If the Central Bank raises interest rates, earnings on the bonds, as a rule, also grow.

History knows of many examples where foreign exchange inflow (while during the times of the gold standard, it was an inflow of gold) resulted from the desire to buy profit making bonds which were often guaranteed by the government. Here are two such examples.

The first example was the famous «consols» in the U.K. (**Fig.1**). They received their name from the Consolidated Fund set up in 1749, which «assembled» all the debts of the Stuart dynasty. Dependable and liquid, these bonds «enjoyed a steady demand and popularity with foreign investors, especially with the Dutch» (Ferguson, 2010, pp. 89-90).

Figure 1. British consol with a 5% coupon.



Source: <http://www.the-saleroom.com>

To a certain extent, it was precisely due to these consols that Britain became the world's financial hub (having beaten the Dutch to it). The very same bonds which were playing the role of «cash pump» assisted Britain in a lengthy stand-off with Napoleon and were conducive to the famous British Industrial Revolution. It is surprising but to this date, the debt under these securities has been (albeit insignificant) part of the British government debt as these bonds are infinitely valid.

Russia also is experienced (though this experience is less successful) in raising foreign exchange like this. What we mean is the notorious government short term bonds, GKO (Government Treasury Bonds), whose market collapsed in 1998. Despite all the flip side of the GKO story, it is a vivid illustration showing that an

inflow of foreign exchange into such instruments is possible and that such an inflow causes the currency to get strong.

We are interested in just one period of GKO operation. During 1996-1997, these bonds, which had a high return¹⁰, started to attract investors including foreign investors.

It was exactly the capital inflow in the GKO that created a situation where the Central Bank was in a «strong position» (that is, the Bank was fighting against the strengthening of the Ruble, maintaining its policy of the fixed exchange rate). And it was exactly being in a «strong position» that allowed the Bank, during a period of several years, to keep the exchange rate stable and steady¹¹.

In other words, if we are to draw object lessons from the mistakes made with GKO¹² and draw upon the positive experience of other countries, then the method of offsetting the equilibrium exchange rate curve may well be used by the Central Bank or the Finance Ministry in order to set the trend for the Ruble's (the local currency's) strengthening.

The Central Bank may conduct its own independent policy in the bond market, as it is in a position to issue its own bonds, the well known bonds of the Bank of Russia (OBR). Please note that cessation of OBR issue in 2011 was one of the decisive factors which adversely affected (not just the inflation picture, but also) the exchange rate situation in Russia.

Diagram and Algorithm of the Central Bank's Actions in the Case of Active Stabilization

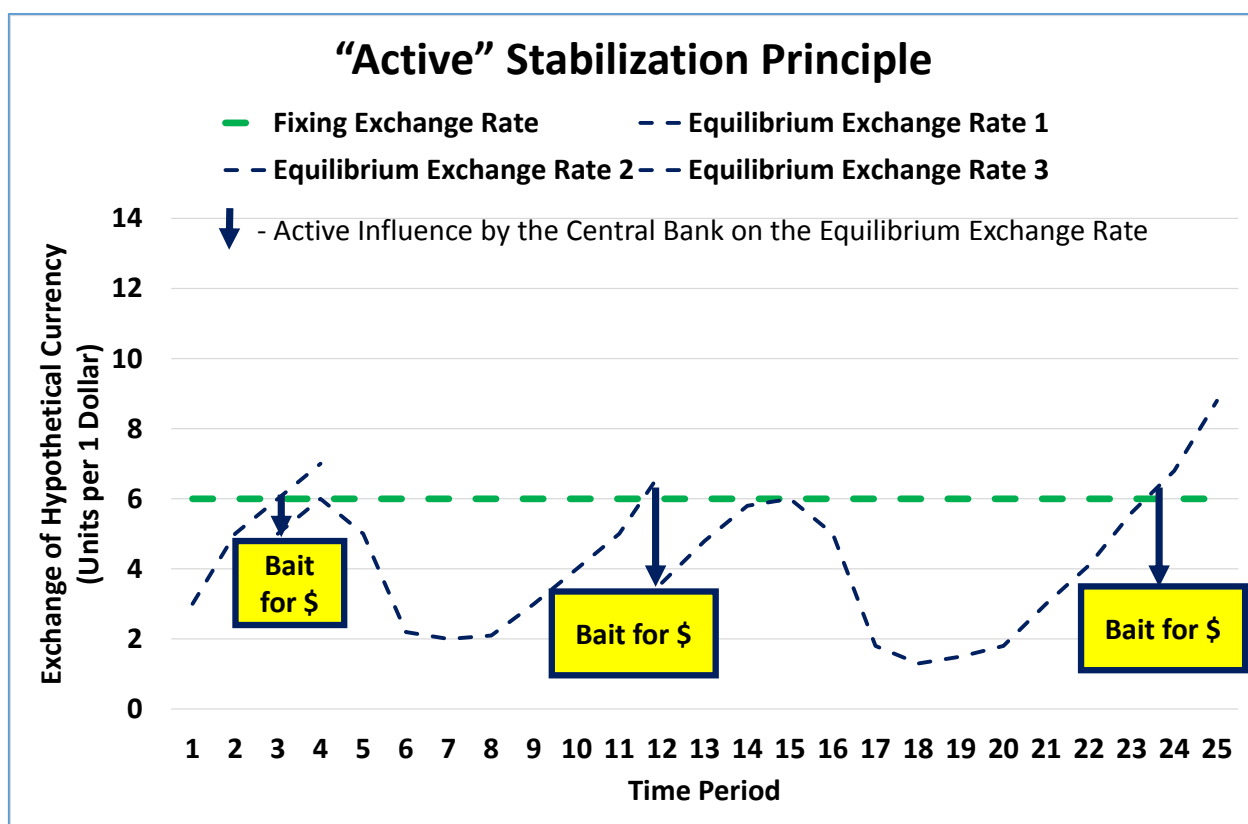
Other examples can be cited. But isn't it more important to understand what is common to all the methods (including those listed above) by which the equilibrium exchange rate curve is shifted downward? And how this is used to stabilize the exchange rate? This is depicted to make it crystal clear in *Diagram 8*.

¹⁰ As early as the beginning of 1998, the rate of return reached 50% per annum, whereas by July, it had reached even the level of 140% per annum.

¹¹ As soon as the capital flows reversed and the market forces started to work to weaken the Ruble, the Central Bank found itself in a weak position. But it did not try to correct it (using the adaptive scenario); and instead it attempted to «deal with» the market free-for-all by resorting to foreign exchange interventions which was a mistake.

¹² One of the drawbacks is the short duration of these securities. Please note again that the British consols had infinite duration.

Diagram 8. Once the equilibrium exchange rate goes beyond the range of the target level, the Central Bank is to «shift» it, thus offering a kind of «bait» (for example, attracting foreign exchange for Ruble assets by raising interest rates or using other methods).



Source: the diagram has been designed by the author.

Let us review the algorithm of the Central Bank’s actions based on the example of this diagram.

Algorithm No.2 (Active Stabilization of Exchange Rate).

1. Stand-By Mode. If the equilibrium exchange rate is higher than the target (desired) fixing level, then the blue dotted line in the diagram is below the green dotted line. In order to maintain a steady exchange rate, the Central Bank, in this case, simply has to buy up foreign exchange for the reserves. No additional measures on the part of the Central Bank are required in this case.
2. Signal To Act. If there emerge such forces as weaken the Ruble (for example, as a result of reduced export earnings or a crackdown on the monetary policy by foreign countries), then the blue line rises above the green one. This is also easy to understand, the exchange rate is going beyond the range of «target» borderlines, (there arises a need to rein in the weakening of the Ruble). Retrospectively, such moments were visible, for example, if the Central Bank started to conduct foreign exchange interventions. In the real time mode, the Central Bank can know it in advance, by the reduction in the purchase

volumes of foreign exchange for the gold and foreign exchange reserves for a definite time period, for example, for a month.

3. Action. Instead of spending reserves on interventions, the Central Bank opts for another path of exchange rate stabilization; it takes such measures as shift the equilibrium exchange rate downward. Whatever such measures may be, their essence boils down to one single thing: to create an additional incentive to induce owners of US dollars (external currency) to acquire Ruble denominated assets (assets denominated in the local currency). The incentive manifests itself in some kind of a «bait», attractor, which makes the foreign exchange «flow» to it. The Central Bank, on its own or in cooperation with the Finance Ministry, has the necessary tools to create such «baits» with. The specific choice depends on the preferences of the Central Bank's management. Examples:
 - a. Raising interest rate for deposits with the Central Bank, the key interest rate for provision of Ruble liquidity against pledge of foreign exchange.
 - b. Raising return rate and volumes of OBR (bonds of the Bank of Russia) sales (or OFZ¹³, upon agreement with the Finance Ministry,).
 - c. Stimulating the stock market (together with the Finance Ministry).
4. Fixing. Concluding item: Central Bank does not let the incipient flow of dollars strengthen the Ruble. It keeps the Ruble's exchange rate stable, by buying up newly emerging «surpluses» of foreign exchange for the reserves. And in the process it is in a «strong position».

The concluding fourth item is very important. In December 2014, having raised the interest rate from 10.5 to 17%, the Central Bank of Russia actually went through all the 3 stages of the process without fixing the result. As a result, instead of exchange rate stabilization, there occurred a sharp strengthening which created conditions for subsequent weakening. It gave rise to “foreign exchange see-saw” which is the most interesting for speculations but harmful for the economy, that is, volatility which, according to the general consensus of opinion set out at the beginning of the article, has to be avoided.

It is worth mentioning that, during the «gold standard» epoch, Item 4 of the above mentioned algorithm, used to be done automatically. This is exactly why an inflow of foreign capital came to be associated with prosperity or well-being. However, beginning from the 1970-s, when the last vestiges of the gold standard sank into oblivion, and currency exchange rates became free, situations became possible in which an inflow of capital did not work for the benefit of the economy; instead, it had a negative effect on it, by strengthening the local currency.

For analogy enthusiasts: the whole process of active stabilization for exchange rate can be portrayed metaphorically as follows:

¹³ Federal borrowing bonds

A gardener (or farmer) uses two water supply sources to water his greenhouse. The first source is rain water from the house roof which is collected into a tank for watering. Very often the gardener runs out of this water. However, if there have not been any rains for a long time and the tank has gone empty, the gardener turns on an electric pump, which pumps water (into the same tank) from the well dug out in the gardener's land plot.

Rain water is the «rain of petro dollars», which is enough for the economy to grow in the case of high oil prices. The well water is the dollars which can be raised for the country with high interest rates (or lucrative investments into some Ruble denominated assets). The level of interest rate (or rate of return on the Ruble denominated assets) plays the role of the pump setting: the higher the interest rate, the higher capacity the pump is set up for. If the Central Bank does not fix the exchange rate, then the flow, which arises only, makes the Ruble's exchange rate stronger (the pumped water from the well does not end up in the tank, it flows missing the tank).

This is the right time to recall the expression «the pump of well-being», we paid attention to, when considering the historical example involving construction of the canal from New York to the Great Lakes. Profitable Ruble denominated assets are just such a «pump of well-being» for Russia, if the Central Bank does not allow the Ruble to strengthen in the process.

Active Stabilization Scenario for Russia

What could the exchange rate of the Ruble look like in the case of active stabilization of the exchange rate? Let us have a look at the hypothetical scenario of active stabilization of the exchange rate beginning from 2013. Let us complete the steps foreseen by our algorithm of active stabilization.

Step 1 – Stand-By Mode

Here it would be sufficient to make the assumption that beginning from 2013 we have been in this mode and have been awaiting the signal of the need to impact the exchange rate situation.

Step 2 – Signal To Act

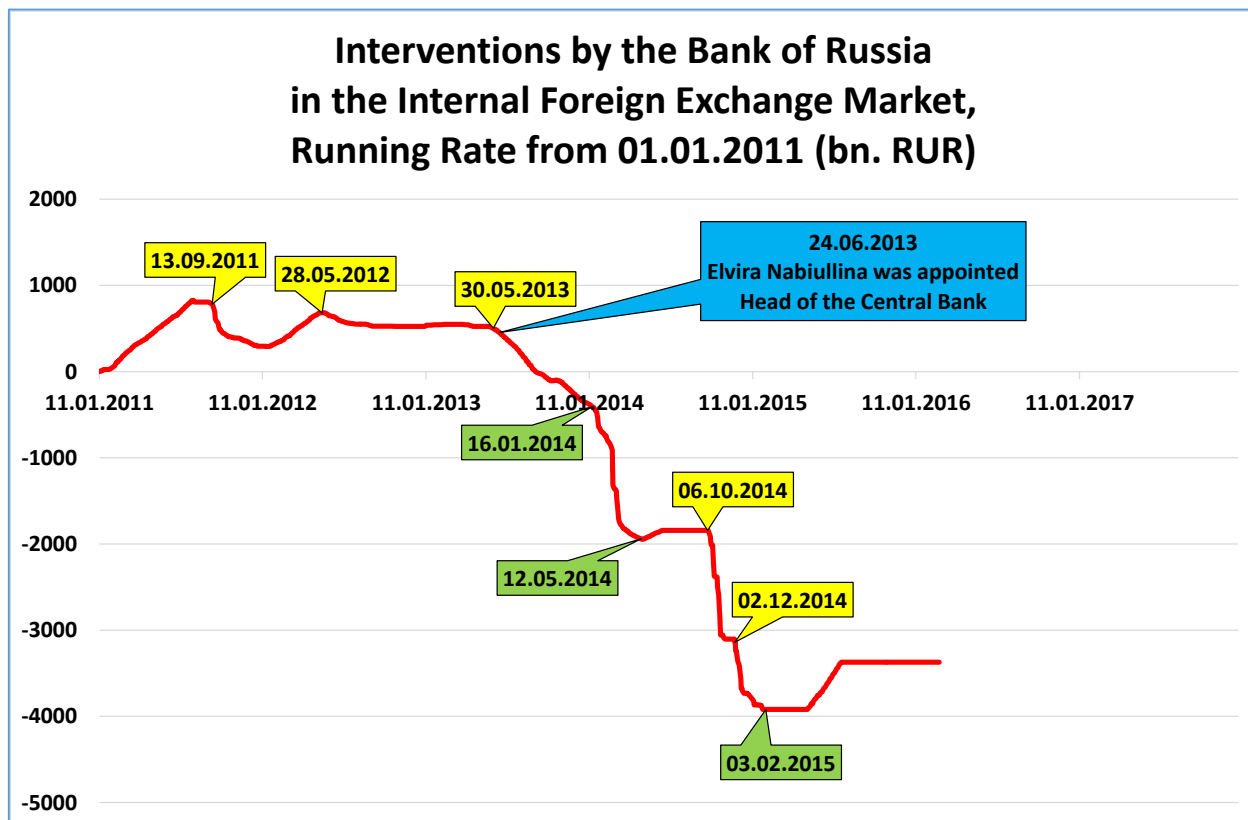
Powerful signals to the effect that exchange rate stabilization was relevant had been coming since 2013 three times: May 30-th 2013, January 16-th 2014 and October 6-th 2014. Below we explain how these particular dates were established.

As we indicated above, retrospectively, the signals of the need for active stabilization for the exchange rate were obvious from drastic ups and downs of the exchange rate and/or by the stepping up of foreign exchange interventions.

Thus, the moment the Central Bank embarked upon foreign exchange interventions was the point at where, instead of these interventions, active stabilization of

exchange stabilization could have been applied. Let us examine such points in *Graph 8*.

Graph 8. Since 2011, the Central Bank had been performing foreign exchange interventions twice: first from June 2013 through May 2014, then from October 2014 through February 2015.



Source: [Central Bank of the Russian Federation](#), author's calculations.

This graph is easy to read.

- Ruble denominated interventions. The Central Bank is in a strong position. If the red line is directed upwards, that means the Central Bank is buying up foreign exchange (replenishing the reserves, conducting Ruble denominated interventions) in the foreign exchange market.
- Foreign exchange interventions (it is exactly these interventions that are of interest to us!). The Central Bank is in a weak position. If the red line is directed downwards, that means the Central Bank is selling foreign exchange (spending the reserves, carrying out foreign exchange interventions).
- No interventions. The Central Bank is in a neutral position. If the red line is horizontal, the Central Bank is not conducting any interventions in the internal foreign exchange market.

Yellow insets in the graph stand for the moments at which the Central Bank began conducting foreign exchange interventions. It is precisely at such moments that the

Central Bank, instead of the interventions, could have carried out the above-described active stabilization of the exchange rate.

We shall not consider the first two such moments (September 2011 and May 2012), as the volume of interventions was relatively small and amounted, in both cases, up to 500 bn. in Ruble terms.

Truly serious, full scale interventions got underway later, starting from May 2013¹⁴.

May 30-th 2013. Having begun on this day and having substantially intensified in January 2014, foreign exchange interventions by the Central Bank continued until May 12-th 2014, almost a year. During that time, the Central Bank sold 2.47 trln. Rubles' worth of foreign exchange. The official exchange rate of the Ruble as at May 30-th 2013, on the day that interventions began, was at RUR 31.5 to one US dollar. As at May 12-th 2014, the official exchange rate comprised RUR 35.2 to one US dollar. The Ruble exchange rate had fallen down.

October 6-th 2014. Having gotten underway on this day, foreign exchange interventions, with short interruptions in November, continued until February 3-rd 2015. During those four months, the Central Bank sold 2.1 trillion Rubles' worth of foreign exchange. The official exchange rate, as at the beginning of the interventions, was at RUR 39.98 to one US dollar, while at the end of them, it was at RUR 69.66 to one US dollar. The Ruble's exchange rate had fallen down again and significantly.

The main parameters of the two phases of the massive interventions of the Central Bank of Russia are given in *Table 1*.

¹⁴ For your information: Elvira Nabiullina became Head of the Central Bank on June 24-th 2013.

Table 1. Main Parameters of the Two Phases of the Massive Interventions by the Central Bank of the Russian Federation During 2013-2015.

	Phase 1		Phase 2	
	Beginning	End	Beginning	End
Date	30.05.2013	12.05.2014	06.10.2014	03.02.2015
Exchange Rate (Rubles per US Dollar)	31,52	35,20	39,98	69,66
CB Key Interest Rate*	5,5%	7,5%	8,0%	17,0%
Volume of Gold & FOREX Reserves, bn.\$	533	467	454,00	360,00
Change in Gold & FOREX Reserves, bn. \$		- 66		- 94
Volume of Ruble Purchases (bn.RUR.)	2 472		2 077	

Source: Central Bank of the Russian Federation, author's calculations.

** for 2013 –the REPO (repurchase) auction rate for 1 day.*

Thus, from the point of view of foreign exchange interventions, the signals to act were issued on the following dates:

- May 30-th 2013 – beginning of active foreign exchange interventions
- January 16-th 2014 – drastic scale-up of interventions
- October 6-th 2014 – resumption of interventions after a five month interval.

From the point of view of exchange rate trend development, October 11-th 2014 should be singled out; the exchange rate passed the important psychological milestone of RUR 40 to one US dollar. This signal of the need for active stabilization coincides with the signal obtained from the data on the interventions.

Conclusion: active actions by the Central Bank were needed in May 2013, in January 2014 and in October 2014.

Step 3 – Action

Our algorithm presupposes that the Central Bank, in case it is determined that stabilization of exchange rate is necessary, has a whole arsenal of tools facilitating an influx of foreign exchange. Foreign exchange interventions are, however, «prohibited».

We shall now take a look (only by way of an example), in what way two tools could have been used, i.e. interest rates and bonds of the Bank of Russia (OBR).

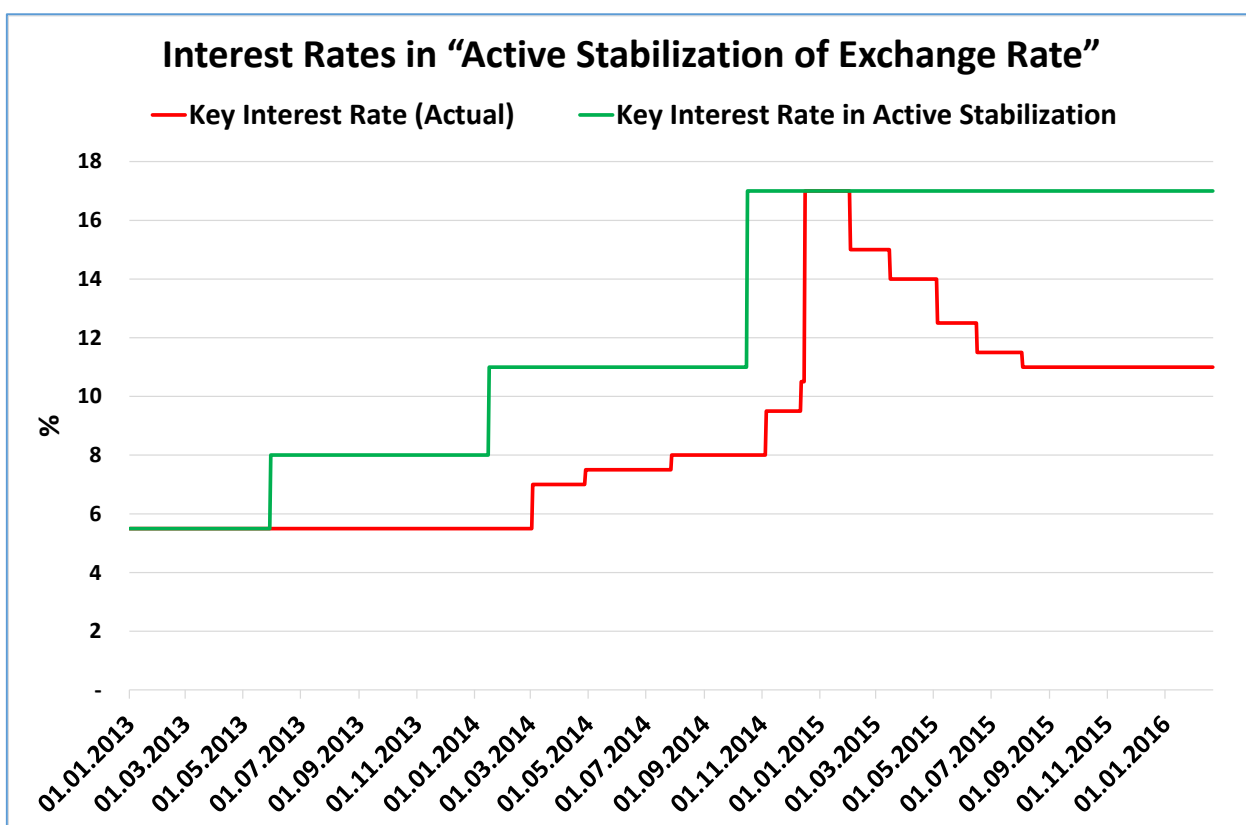
Interest Rates

In the simplest scenario, the Central Bank could have raised them in May 2013 and then once again raised them in January 2014 and (if necessary) in October 2014.

Schematically, the raising of the key interest rate according to the algorithm of active stabilization for the exchange rate (Algorithm No.2) compared to the actual value of the key interest rate of the Central Bank from January 2013 is shown in **Graph 9**.

As can be seen from this graph, for active stabilization of the exchange rate, an earlier reaction of the Central Bank and a more active raising of the interest rates were required.

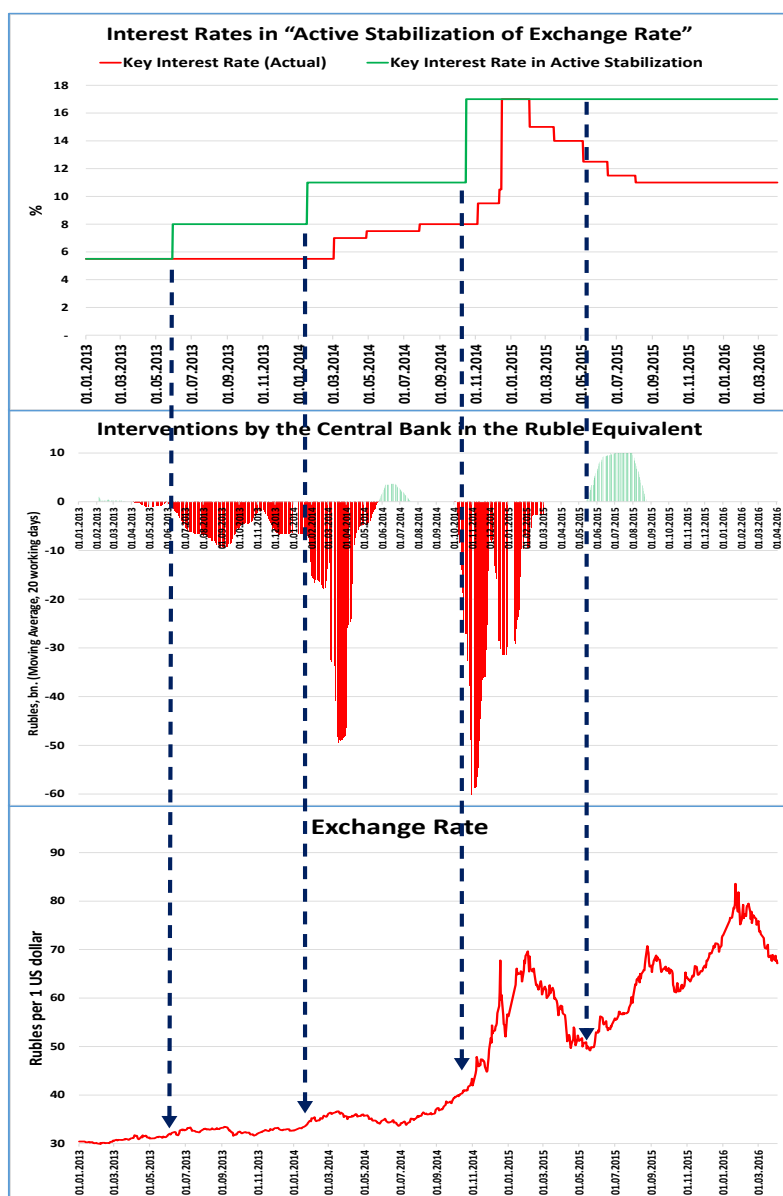
Graph 9. Active stabilization of the Ruble's exchange rate required an earlier raising of the interest rates by the Central Bank. As a matter of fact, the Central Bank acted with a huge delay.



Source: Central Bank of the Russian Federation, author's calculations. *Note: the level of interest rate in active stabilization is shown schematically, it could have been a different one in line with the changing environment.*

The raising of interest rates by the Central Bank in 2013 and 2014 was too late. While the lowering of interest rates in 2015 was, on the contrary, premature. This can be clearly seen when comparing the trend development of the interest rate with the scale of the interventions by the Central Bank and the Ruble's exchange rate (**Graph 10**).

Graph 10. In 2013 and 2014, the raising of interest rate by the Central Bank was too late. In 2015, the lowering of the interest rate was premature.



Source: Central Bank of the Russian Federation, author's calculations. Explanation: in the graph of interventions (in the Ruble equivalent) the red color shows sale of foreign exchange, the green color shows purchase of foreign exchange.

Keeping the interest rate at the level of 17% and keeping the Ruble at the level of RUR 70 to one US dollar from the beginning of 2015 (battle against its strengthening) could have stabilized its exchange rate and, in all probability, could have avoided the surge of the exchange rate up to 80 Rubles to one dollar in early 2016.

It is noteworthy that such a scenario of exchange rate stabilization was proposed more than a year ago, in January 2015 ([«Secrets of the Ruble's Stable Exchange Rate»](#), Blinov, 2015d). Quote:

«If the Central Bank, now (just as the Bank of Switzerland at its time) had announced that, for example, RUR to one US dollar is the strongest exchange rate that it would allow. And that it would print as many Rubles to support this level as might be necessary. Just imagine what an enormous relief it could have been for the foreign exchange market.

1. A run on foreign exchange would have stopped quickly.
2. Exporters and other companies selling foreign exchange reserves would have been glad to sell foreign exchange at the over-valued price. They would have been joined by those who had purchased foreign exchange at the peak of its price and were now tearing at their hair out of frustration.
3. Foreign investors, having seen stability of the exchange rate, would have rushed to buy up Russian stock. And they are indeed very attractive at such an exchange rate, they have a huge growth potential. It would be appropriate to charge them for admission.
4. Companies with import substitution capability, would stop fearing that the Ruble's exchange rate might get stronger. They would be more confident in implementing their investment plans (from production of food to greater local content for international companies at their motor vehicle production facilities in Russia).

And what a great disappointment it would be for Russia's detractors when they see that her gold and foreign exchange reserves have started to become replenished and the Ruble's exchange rate is stable while the stock market is growing!»
(Unquote)

Attractive Assets

It has been mentioned above that, for Russian legal entities and physical persons, Ruble denominated securities issued by the Finance Ministry (for example, OFZ) and the Central Bank (OBR) with attractive rate of return are an alternative to the purchase of the US dollar, while for foreigners it is a kind of «bait or teaser» to induce them to enter into Ruble denominated assets. Timely issuance of such attractive instruments, undoubtedly, becomes a stabilizing factor for the foreign exchange market.

Below we shall examine the idea of the OBR which actually could serve as an alternative to the US dollar.

In the market in foreign countries (for example, USA), there exist government securities whose nominal value is indexed by the level of inflation. That is, they are actually protected from inflation. The Finance Ministry of Russia also started to issue such instruments in 2015.

Just in the same fashion, Ruble denominated securities could be issued whose nominal value changes depending on the exchange rate of foreign exchange, for

example, the US dollar. And such securities would protect investors, in this particular case, from the Ruble devaluation (the local currency devaluation).

It makes a lot sense to task the Bank of Russia to issue such securities as a special type of OBR. Unlike the Finance Ministry, the Bank of Russia would not be tempted «to spend» the funds thus generated, increasing the budget deficit and the government debt.

As a matter of fact, such securities would be very closely analogous to the US dollar, with the only difference being their denomination in Rubles. Trying to think this idea through makes you conclude that it is tantamount to the Central Bank being given the right to issue, as it were, «Ruble type» dollars.

Such a property of the OBR (bonds of the Bank of Russia) denominated in Rubles but pegged to the value of foreign exchange would allow them to be used for interventions in the money market and the Ruble's exchange rate to be influenced. Activation of such OBR sales would make the foreign exchange market stable.

The possibility of using such OBR was discussed in the article [«Savings and Inflation Using the Example of Russia in 1992»](#) (Blinov, 2015e) as a tool of fighting inflation.

Step 4 – Fixing

It is important for the Central Bank not to allow the forces which have arisen at its initiative to make the Ruble stronger. Any way, the importance of fixing has already been dealt with at length above.

Brief Summary and Possible Actions To Be Taken by the Central Bank

Let us sum up briefly everything that was said above. In Russia, one can observe a very high volatility of the Ruble's exchange rate. Besides both business and government officials as well as the expert community agree that what is important is not so much the strong Ruble as just the stable Ruble. The management of the Central Bank has officially signed off on its own inadequacy with respect to stability of the Ruble's exchange rate. Though this responsibility continues to rest with the Central Bank under the Constitution of Russia.

Despite the seeming complexity of the task, the Central Bank does have, indeed, simple methods of stabilizing the exchange rate for a long time which do not require to spend foreign exchange reserves and, besides, which are useful for economic growth.

For that purpose, as a minimum, the Central Bank has to begin using its infinite and unlimited capabilities of eliminating from the Ruble's fluctuations the phase of its strengthening.

These lines are being written on February 21-st 2016. The official exchange rate of the Ruble is sitting at the level of RUR 77 to the US dollar. What could be possibly done right away?

Use a «management yarn». When the plant director was asked how he had solved the problem of product quality, he replied: «I told the production director that I would fire him if scrap is more than 1%. And I told the chief of the quality control department that I would fire him if he, when accepting products, was to reject less than 2%. Of course, I am not firing anyone but since then I have not had any quality issues».

In this story, the director set mission impossible to accomplish, at least, before one of his subordinates. But he still managed to achieve stable quality.

The Central Bank has to do something similar as well. It would make sense, on the one hand, to raise the key interest rate and use other tools for the equilibrium exchange rate to shift towards strengthening, into the range of RUR 70 to one US dollar. On the other hand, it has to make such strengthening a mission impossible to accomplish. For this purpose, it would be enough, with the stronger exchange rate of the Ruble than, say, RUR 80 to one US dollar, to be active in replenishing the international reserves by buying up dollars. Or (for example, by assignment of the Finance Ministry) replenish the budgetary foreign exchange funds by buying up foreign exchange at the currency exchange. It is important to use the Central Bank's capability of battling against the strengthening of the Ruble for an infinitely long time, and of not letting the Ruble get stronger lower than RUR 80 to one US dollar. And then stability of the exchange rate will be ensured for a long time.

EXPECTED QUESTIONS

The methods and algorithms described above can cause certain expected questions. Let us try to answer them.

Stabilization of Exchange Rate and Inflation

The exchange rate policy can influence inflation using many methods. Let us consider how the following two factors influence inflation: (1) uni-directional weakening of the Ruble and (2) Ruble issuance when battling against the strengthening of the Ruble.

Is Inflation Influenced by the Uni-Directional Reduction in the Ruble's Exchange Rate?

The Ruble, during the adaptive stabilization, does not strengthen (either it does not change, or weaken). Doesn't this uni-directional movement of the exchange rate influence inflation towards weakening?

The doubt which is expressed in this question proceeds from the following assumptions:

1. The adaptive method leads to greater weakening of the Ruble.

2. The range of exchange rate fluctuation, its changeability (volatility) does not influence inflation.
3. The weakening of the Ruble facilitates inflation.
4. The strengthening of the Ruble helps battle against inflation.

Below we shall see that neither of these assumptions is borne out by facts.

Adaptive Method Does Not Lead To Greater Weakening of the Ruble

Regarding the First Assumption. Just a look at **Graph 3** shows that the weakening of the Ruble with adaptive strategy is either lacking, or coincides with the scenario of the freely floating exchange rate. Besides, on the contrary, adaptive stabilization leads to lesser weakening of the local currency, if, for example, step-wise devaluation applies. Therefore, the first assumption is not true.

Lack of Volatility Reduces Inflation

Regarding the Second Assumption. Fluctuation of the exchange rate, its volatility, in themselves exercise an inflationary influence, even if, after fluctuations, the exchange rate returns to the initial point. This is precisely what Dmitry Tulin, Deputy Chairman of the Central Bank, speaks about in the above quotation, when he asserts that «volatility of the exchange rate, instability cause asymmetrical uni-directional inflationary influence on internal prices».

To put it simply, if the Ruble weakens, the prices go up. However, if the Ruble after that begins to strengthen quickly, the prices (instead of expected reduction) go up again! It all boils down to the fact that exchange rate fluctuations mean instability. While, under instability conditions, all the economic agents are forced to bear additional costs to guard against risks. And this is reflected in the prices of the contracts. Therefore, the assumption to the effect that stability does not influence inflation in any way, is wrong fundamentally.

Weakening of the Exchange Rate Often Does Not Cause Inflation

Regarding the Third Assumption. The influence of the currency weakening on inflation is not unambiguous at all. Above we referred to examples of the step-wise devaluation in Kazakhstan and mentioned that actually there had not been any spike of inflation. And even with greater weakening of the local currency, a spike of inflation has a fading-out pattern to it due to change in consumption structure which was shown above (see Diagram 7)

The Strengthening of the Ruble Does Not Help Avoid Inflation

Regarding the Fourth Assumption. It has to be mentioned that erroneousness of linking inflation with devaluation is confirmed by one more phenomenon. Logically speaking, if the weakening of the Ruble facilitates inflation, then the strengthening of the Ruble must assist deflation or, at least, decline in inflation level. However, for example, the period of Russian history from January 2003 through July 2008 shows otherwise. The Ruble then strengthened from RUR 32 to 23 to one US dollar. However, no «anticipated» reduction in inflation, or let alone emergence of

deflation, occurred. The prices for this period rose by 80%, while inflation in annualized terms was above 14% both at the beginning of this period and at the end of it. The fourth assumption is not backed up by facts, either.

Often it has something to do with the fact that the Ruble's strengthening is fought against by Ruble interventions in the money market. This issue is considered below.

Is Inflation Influenced By Injection of Rubles into the Economy During the Ruble Stabilization? Both proposed methods of exchange rate stabilization – the adaptive and active ones – presuppose battling against the strengthening of the Ruble's exchange rate by conducting Ruble interventions. As a result, a large amount of Rubles is injected into the economy. And there may arise a concern that it would cause inflation.

This is exactly what **Arkady Dvorkovich**, currently Deputy Chairman of the Government, meant when, some time ago, he said that "it is extremely difficult to counter the strengthening of the Ruble at a high oil price" ([Becker and Grozovsky, 2003](#)).

This is exactly what **Alexey Kudrin** is saying: «Great surplus on the account of balance of payments current operations results in an increase in the nominal exchange rate of the national currencies, which causes the economy's competitiveness to decline. Attempts to slow down the speed of growth for this exchange rate results in increased volume of gold and foreign exchange reserves and, consequently, in additional issuance of money, by far exceeding the economy's needs. As a consequence, the monetary and credit system becomes imbalanced, inflation speeds up, real effective exchange rate of the national currency goes up» ([Kudrin, 2006](#)).

Such concerns are unfounded.

First, during certain periods of especially rapid growth of money supply (1999-2000; 2001-2003; 2004-2006), inflation (bucking the logic) decreased faster than usual.

Secondly, with high growth rates of the money base and money supply, during 1999-2008, (from 22% to 70%), inflation did not accelerate to higher levels, did not tend to keep up with money supply growth rates, on the contrary, it invariably, virtually all the time, continued to go down.

If we are to look at the data for the 1997-2014 time period, other phenomena can be discerned, fully contradictory to Kudrin's logic, for example, upsurges of inflation against the backdrop of decline in money supply («[Dr. Kudrin's Mistake](#)», Blinov, 2015a)

Arkady Dvorkovich, in 2007, quite accurately determined that the problem was not with the inflow of money into the economy. He put this idea into words as follows: «"The concerns that are being voiced are greatly exaggerated, no significant problem from the point of view of capital inflow influencing inflation exists», – he

emphasized. Mr. Dvorkovich, as always, expressed the hypothesis that "the main factor which reduces or increases inflationary pressure is not the capital inflow, it is demand for money". As proof, he referred to the fact that during the last few years, growth of money supply had been fluctuating between 35% and 50%, while inflation, at the same time, had been going down due to economic growth» ([«Officials Choose Between the Ruble and Inflation»](#), Shapovalov, 2007).

Also then, in May 2007, Dvorkovich proposed one of the correct recipes for the Central Bank to action upon. He said "that the Central Bank was over-emphasizing the Ruble's strengthening" as a weapon to fight inflation and suggested that the Bank as well as the Government sterilize surplus money supply by expanding issue of long term bonds in the internal market ([«Arkady Dvorkovich Wants to Lengthen the Bonds»](#), Visloguzov, 2007).

This proposal is very appropriate: savings have a much stronger effect on inflation than money supply. If the Central Bank, in 2003-2008, had not allowed the Ruble to strengthen at all¹⁵, the increment of the gold and foreign exchange reserves would not have amounted to USD 500 bn., it could have possibly amounted to twice as much. And the additional quantity of Rubles (equivalent to additional reserves) could have well been attributable to the long bonds of the Central Bank or the Finance Ministry. And this would have created a much more favorable situation with «long money» in Russia until the present time.

The Central Bank does have other methods as well (apart from issue of OBRs) to sterilize some money, in the case of the large inflow of Rubles during the Ruble interventions. For example, the standard for mandatory provisions for the banks may be raised. In this case, money supply growth will continue, but the money supply will be growing at lower rates due to reduced monetary multiplier.

So, we have considered the concerns with regard to the fact that conducted policy of adaptive or active stabilization of the Ruble might be conducive to inflation. We have seen that these concerns are unnecessary and that the Central Bank has indeed dependable ways of keeping inflation under control.

Stabilization of Exchange Rate and Economic Growth

The second set of questions have something to do with how the policy conducted can influence economic growth. Let us consider two of these questions.

Does the raising of interest rates impact economic activity negatively?

When carrying out the policy of active stabilization, it is proposed that the Central Bank should use the raising of interest rates as one of the tools for stabilization of the Ruble's exchange rate. A question arises which is as follows: wouldn't such raising of interest rates have a depressing effect on the economy?

¹⁵ From RUR 32 to 23 to one USD between January 2003 and July 2008

Fortunately, such concerns are groundless. The point is that the Russian (just as any other one, for that matter) economy does not react to the level of interest rates. What is much more important for economic growth is the indicator of real money supply (nominal money supply M2, adjusted for the level of inflation). Such a conclusion is confirmed by actual facts from the economic history of Russia and other countries.

While high interest rates do not hinder growth of real money supply and the economy at all. Thus, for example, in Russia, during 1999-2008, the interest rates of the Central Bank were high, however, in spite of that, economic growth was vibrant as real money supply had been growing by 20% and more in annualized terms. Money supply grew, among other things, as a result of the exchange rate policy, specifically the battle that the Central Bank was waging against the strengthening of the Ruble (see also «[The Policy of Quantitative Easing At High Interest Rates of the Central Bank](#)», [Blinov, 2014](#)).

Those who criticize the raising of interest rates and advocate their lowering, are hoping to increase the amount of money in the economy this way. However, these hopes are vain. Low interest rates are not synonymous with real money supply growth, at all. Japan is the example. There, despite the low (nearly zero) interest rates, since early 1990-s, the economy has been stagnating, the so-called «lost decades». The reason for that being the sharp reduction in growth rates of real money supply (see also «[Real Money and Economic Growth](#)», [Blinov, 2015c](#)).

At low interest rates, another negative effect often manifests itself. Let us make a point that what is important for growth is the growth of real rather than nominal money supply. And the higher inflation is, the more noticeable portion of the nominal money supply «is eaten up» by inflation. And this is another problem with low interest rates, since, they, given other conditions are equal, are instrumental in inflation.

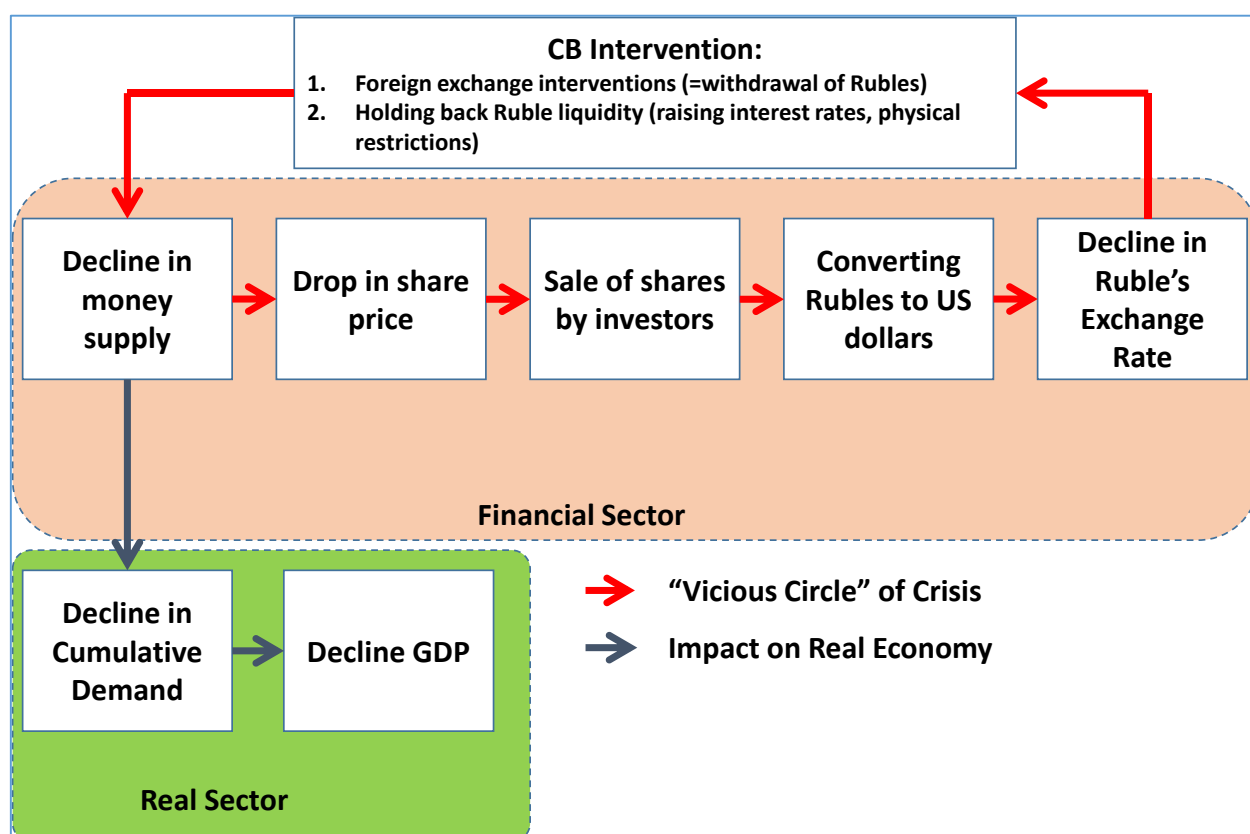
Can stabilization of the exchange rate be used to boost economic growth?

Dependence of economic growth on real money supply (see above), allows the foreign exchange policy to be used to stimulate economic growth.

Both methods of stabilizing exchange rate proposed (adaptive and active) do not provide for Rubles to be withdrawn from the economy in the course of foreign exchange interventions. And, the other way around, they presuppose saturation of the economy with Rubles as the battle against the phases of the Ruble's strengthening goes on.

On the one hand, «a ban» on US dollar (foreign exchange) interventions of the Central Bank allows their negative influence on the economy caused by withdrawal of Rubles to be avoided. (see *Diagram 9*).

Diagram 9. Foreign exchange interventions make the economic situation worse rather than better, only aggravating the crisis phenomena.



Source: «[Vicious Circle of Economic Policy](#)» (Blinov, 2015b)

On the other hand, encouragement of Ruble interventions allows the exchange rate policy to be used to saturate the economy with Rubles, thus stimulating economic growth. The technology is simple enough. It suffices to recall that the «gap» between the equilibrium exchange rate and the rate maintained by the Central Bank drives the volume of Rubles inflow into the economy and, simultaneously, the inflow of foreign exchange into the gold and foreign exchange reserves (see Diagram 5 and «General Rule» beneath this Diagram).

In order to stimulate economic growth, the above mentioned gap (by means of adaptive or active actions on the part of the Central Bank) is set such that an inflow of foreign exchange and the inflow of Rubles corresponding to it into the economy ensures required growth rates for real money supply, which would make up for reduction in money supply caused by other measures (for example, by the raising of interest rates), and ensure investment related growth of the economy. For Russia these growth rates amount to 20% in annualized terms and more.

It is amazing but it was exactly this method of stimulating the economy that was used twice (quite intuitively), in 1997 and during 1999-2008.

The article «[Three Options of Economic Policy for Russia](#)» (Blinov, 2016b) sets forth a similar action plan for Russia's exit from the crisis and transition to

investment growth within 6 months. For that purpose, the fixing exchange rate and the interest rate of the Central Bank are set in such a way as to make the volume of reserves replenishment amount to approximately \$20 bn. a month. That would mean that, in the course of Ruble interventions by the Central Bank, more than 1.5 trln. Rubles would be added to the economy. With the rate of inflation being at 0.8-1% per month, such monthly growth would mean that in a space of 6 months, growth rates of real money supply would exceed the required 20% in annualized terms. In Russia, it is not just economic growth that would set in but also growth of investments would resume.

Exchange Rate Stabilization and Targeting Inflation

One more question may arise: is the policy of exchange rate stabilization consistent with the policy of targeting inflation proclaimed by the Central Bank of Russia, as it (the targeting policy) presupposes free floating of the exchange rate?

First off, we have already seen that the proclaimed policy does not prevent the Central Bank from carrying out Ruble interventions (green zone in Graph 8 in the middle).

Secondly, the Central Bank can steer the policy described above without shouting from the roof tops about the specific levels at which it is to begin replenishing the reserves.

Thirdly, if inflation is not to be treated formally (nominally), and if it is to be treated in real terms instead, then Russia is currently experiencing true deflation, which invariably and in all the countries causes the economy to sink into crisis or stagnation (see «[Central Bank and Vasilisa the Wise or Deflation Under Mask](#)», Vernanke, 2015)

And, finally, it has to be clearly understood that the main obligation of the Central Bank to keep the Ruble's exchange rate stable enshrined in the Constitution and the law on the Central Bank has greater priority than the policy proclaimed by the Central Bank itself which it can change at any time by its own decision.

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